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JULY 22, 1968

RAILWAY AGE

THE TRANSPORTATION WEEKLY

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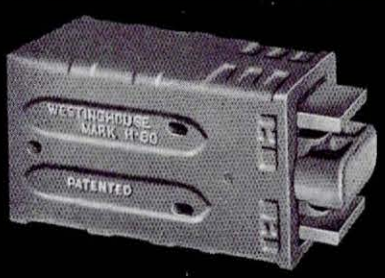
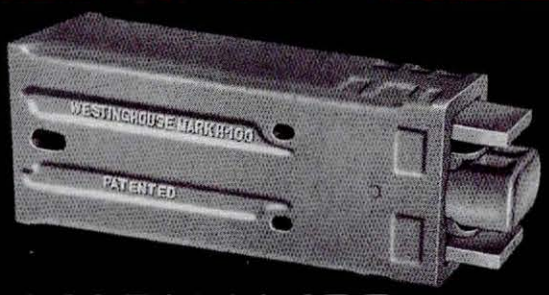


MARK H-60



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CARDWELL WESTINGHOUSE *hydraulic-friction* DRAFT GEARS

The Westinghouse Mark H-60 and the Mark H-100 Draft Gears combine hydraulics and friction to provide superior impact protection for your cars and ladings. The velocity-sensitive hydraulic mechanism automatically adjusts itself to impacts with heavy or light loads, high or low velocities. At the same time, the sill force is kept within safe limits. In service since 1963, performance results are excellent!

The Mark H-60 fits all cars having the new standard 17-3/4-inch striker and 24-5/8-inch pocket, travel 3-1/4-inches. The Mark H-100 fits the alternate standard A.A.R. 36-inch pocket using an alternate standard 25-inch coupler, travel 4-3/4-inches.

For superior impact protection for your cars and ladings, Specify Mark H-60 or Mark H-100!

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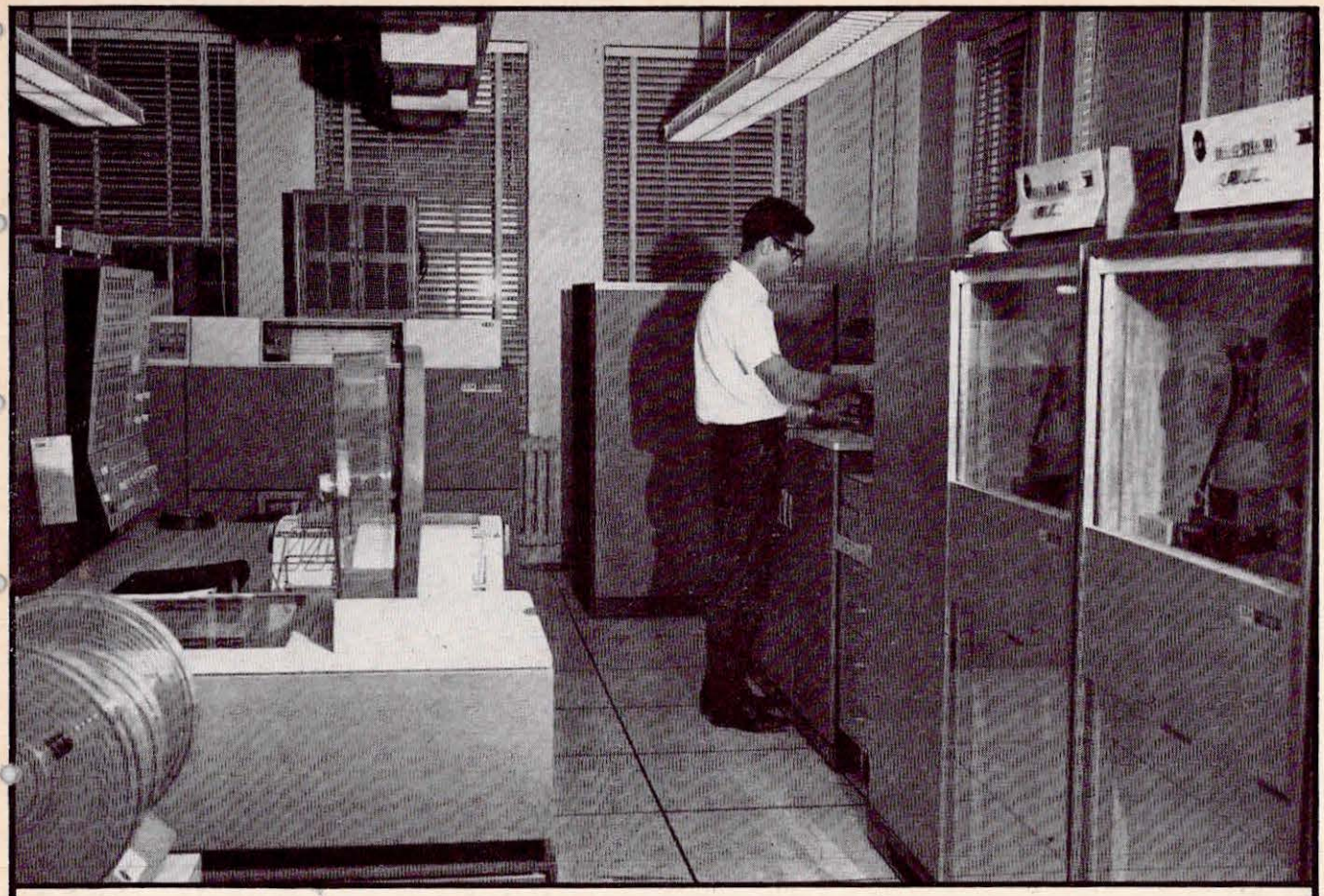

Running trains on a computer ...another GRS capability

By simulating train operation on a computer, we can predict what would happen if you added trains, relocated sidings, regraded, etc.

This is typical of GRS capabilities. We offer far more than well designed hardware. We can place, at your service, in-depth knowledge and the benefits of well over 60 years of systems engineering experience.

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automatic block signaling
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switch circuit controllers
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train stops

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programs for automating clerical procedures and reports
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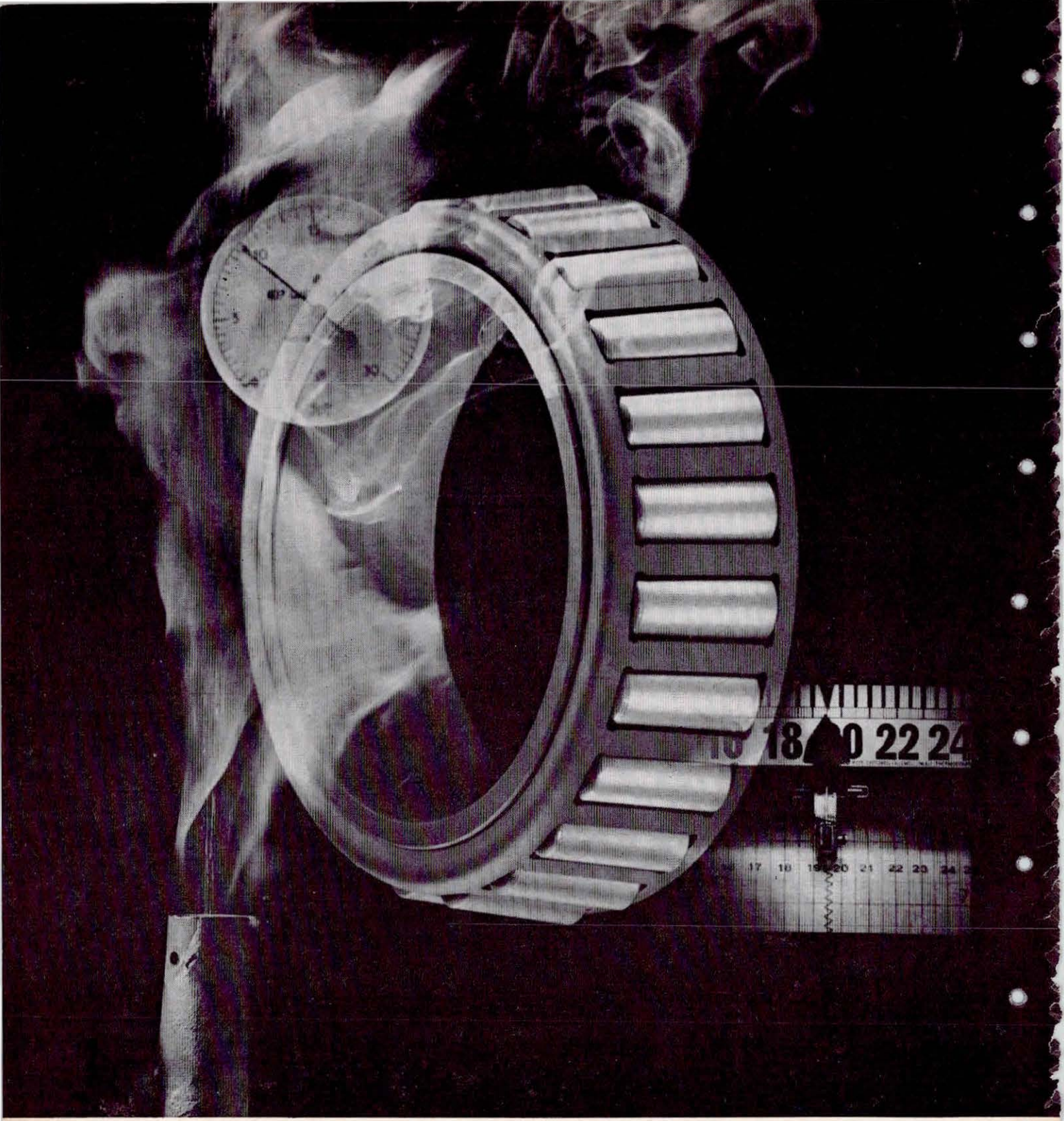

Brenco performance begins with modern heat treatment...

Brenco *crown-taper* roller bearings are the most modern of all.

BRENCO, INCORPORATED
PETERSBURG, VIRGINIA

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RAILWAY AGE

July 22, 1968 • Vol. 165, No. 3

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. . . AND COMING NEXT WEEK

Computerized car-locating systems are bringing the old car-tracing function into a new technological era. A Railway Age survey, in the July 29 issue, shows how today's system works—and how they're working for both railroads and customers. There is also a closeup look at one of the industry's newest third-generation systems, in operation on the Burlington. And the Traffic Poll takes a look at car-tracing capabilities from the shippers' viewpoint. Like all Freight Traffic issues, this one will be mailed to 10,000 leading shippers, as well as to the regular subscriber list.

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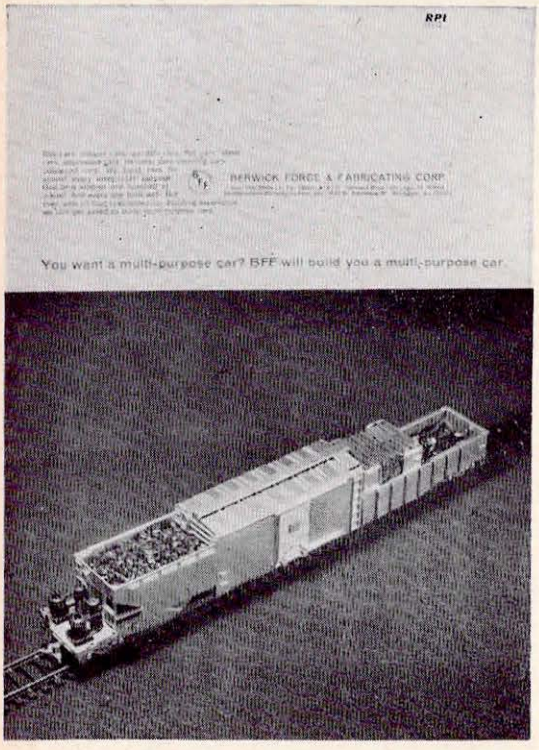
We found a customer for our multi-purpose car.



Our multi-purpose car ad as it appeared in the April 29 issue of Railway Age.

When a twelve year old purchasing agent with the initiative of Tom Tancula recognizes BFF can deliver the car to meet his railroading needs, we can't very well turn him down. So in only two days we delivered our special flat-hopper-box-pulp-gondola car right to his door. That's the kind of service we try to give every job we do. But then, Tom was a model customer.

Tom Tancula accepting delivery of multi-purpose car from Walter Vorbleski, Vice President, Sales.

7744 W. Winston Ave.
Norridge, Illinois 60656
May, 1968

Berwick Forge and Fabricating Corp.
Box 188
Berwick, Pa. 18603

Dear Mr. Vorbleski,

My dad who works for the Milwaukee Railroad brought home the April 29, 1968 issue of Railway Age in which I saw your advertisement about a multi-purpose car. The track and car and coupler matched my H.O. gauge layout. I began thinking that I would really like to have this car for my layout. Therefore I am asking you for this car if you and your company would be kind enough to give it to me.

I am twelve years old and a sixth grade student at Divine Savior School in Norridge. Please reply to me if you can get this car to me and I will be very grateful to your company and especially to you if I get it, but if I do not I thank you very much any way.

Yours truly,
Thomas Tancula

THOMAS TANCULA
7744 W. Winston Ave.
Norridge ILLinois 60656

P.S. Please find enclosed photo of your ad in Railway Age incase you did not see it.

BFF

BERWICK FORGE & FABRICATING CORP.

Box 188 Berwick, Pa. 18603 Chicago: 80 E. Jackson Blvd.
Arlington: Southeastern Railway Supply, Inc., 933 Kenmore St.

Circle 5 on coupon page 34

SHORT AND SIGNIFICANT

Trainmen are first to approve wage agreement The Brotherhood of Railroad Trainmen, the largest of the operating unions, has become the first of the ops to settle a 1968 wage-rules case. The new agreement with the BRT follows generally the pattern set earlier in settlements with five non-operating organizations. There are general wage increases of 2½% retroactive to Jan. 1, 1968; 3½% retroactive to July 1, 1968; 2% effective Jan. 1, 1969; and 3% effective July 1, 1969. A further increase of 5 cents an hour was made effective July 1, 1968, for certain employees assigned to yard and local-freight service. There are vacation and holiday improvements. And there is a two-year no-strike moratorium. In addition, the BRT agreement contains a provision which the National Railway Labor Conference calls unique in the industry—a provision covering benefits for employees involved in accidents while riding in off-track conveyances under company authorization.

MoPac reefers to become box cars in rebuild plan In what shapes up as a major rebuild program, Missouri Pacific is taking 400 refrigerator cars — sound cars for which there's little current demand—and turning them into standard Class A box cars. The conversion program will stretch over two years; many of the cars will wind up assigned to flour service. In the process, the cars will lose their heavy insulation and special cargo-handling equipment. Capacity will be increased from 1,893 to 3,100 cubic feet. Load limits will be raised from 74,000 to 97,000 pounds, and car weight will be cut from 61,200 to 45,000 pounds. Plug doors will be replaced with 8-foot sliding doors, and laminated hardwood flooring will be installed.

ICC sets hearings for investigation of freight rate hike ICC hearings on the railroads' Ex Parte 259 freight-rate increase will be held in Washington from Sept. 9 through Oct. 7. The hearings will be part of the Commission's investigation of the interim increase of 3% which it authorized last month, and of the whole railroad proposal contemplating advances ranging up to 10%. The latter would yield $462 million a year, compared with $250 million expected from the interim hike (RA, June 24, p. 11).

New Jersey to get rebuilt coaches for commuter service Seventeen former Rock Island passenger coaches will soon be carrying passengers on the Jersey Central. The state's Department of Transportation will lease the stainless steel, air-conditioned cars under an agreement with the Norfolk & Western and Chesapeake & Ohio/Baltimore & Ohio, who purchased the cars. The cars are being renovated at the Reading Shops in Reading, Pa., at a cost of about $7,500 each. The cars are the first of 50 which the state's Commuter Operating Agency has authorized the Department of Transportation to obtain to improve service on the CNJ. The state is also planning to buy 13 new locomotives under the program.

A new rail line gets its first unit coal train The Waynesburg Southern, a $20-million creation of the Penn Central, has gone into operation hauling coal via unit train from a West Virginia coal field with reserves of a half billion tons. The 35-mile road, between Waynesburg, Pa., in southwestern Pennsylvania and the Blacksville area of northern West Virginia, is serving the new mine of the Eastern Associated Coal Corporation near Bula, Monongalia County, W. Va. Penn Central Chairman Stuart T. Saunders said the new operation will be important to the economic well-being of the area, providing employment for about 500 men. The new mine, Federal No. 2, is automated and is one of three mines planned on the Waynesburg Southern. The WS connects, at its northern terminus, with the Monongahela, to which it is leased for operating purposes.

MONDAY MORNING REPORT

FOR CANADA, A NEW LOOK

National Transportation Policy, so some say, is non-existent in the United States—or, if the existence of such policy is conceded, then it is argued that the result is a mish-mash in which nobody, carrier or customer, benefits as he should or could. Creation of the Department of Transportation last year may bring new policy, or it may not. Meantime, U.S. transportation people might be giving a look at Canada—and the Canadian Transport Commission, established by act of Parliament last year with promulgation of the National Transportation Act.

THE GOAL: BEST USE—AT LOWEST TOTAL COST

As CTC puts it, "central to the new legislation and to the decision-making functions of the Commission is the declared policy that 'an economic, efficient and adequate transportation system making the best use of all available modes of transportation at the lowest total cost is essential to protect the interests of the users of transportation and to maintain the economic well-being and growth of Canada.' "

RESEARCH, WITH WELL-DEFINED TARGETS . . .

In support of the effort to meet these policy requirements, CTC has set up its own research division, "to develop broad and consistent national transportation policies compatible with the enacted legislation and to initiate studies concerned with determining how coordination in the development and regulation of the various modes of transport is to be achieved."

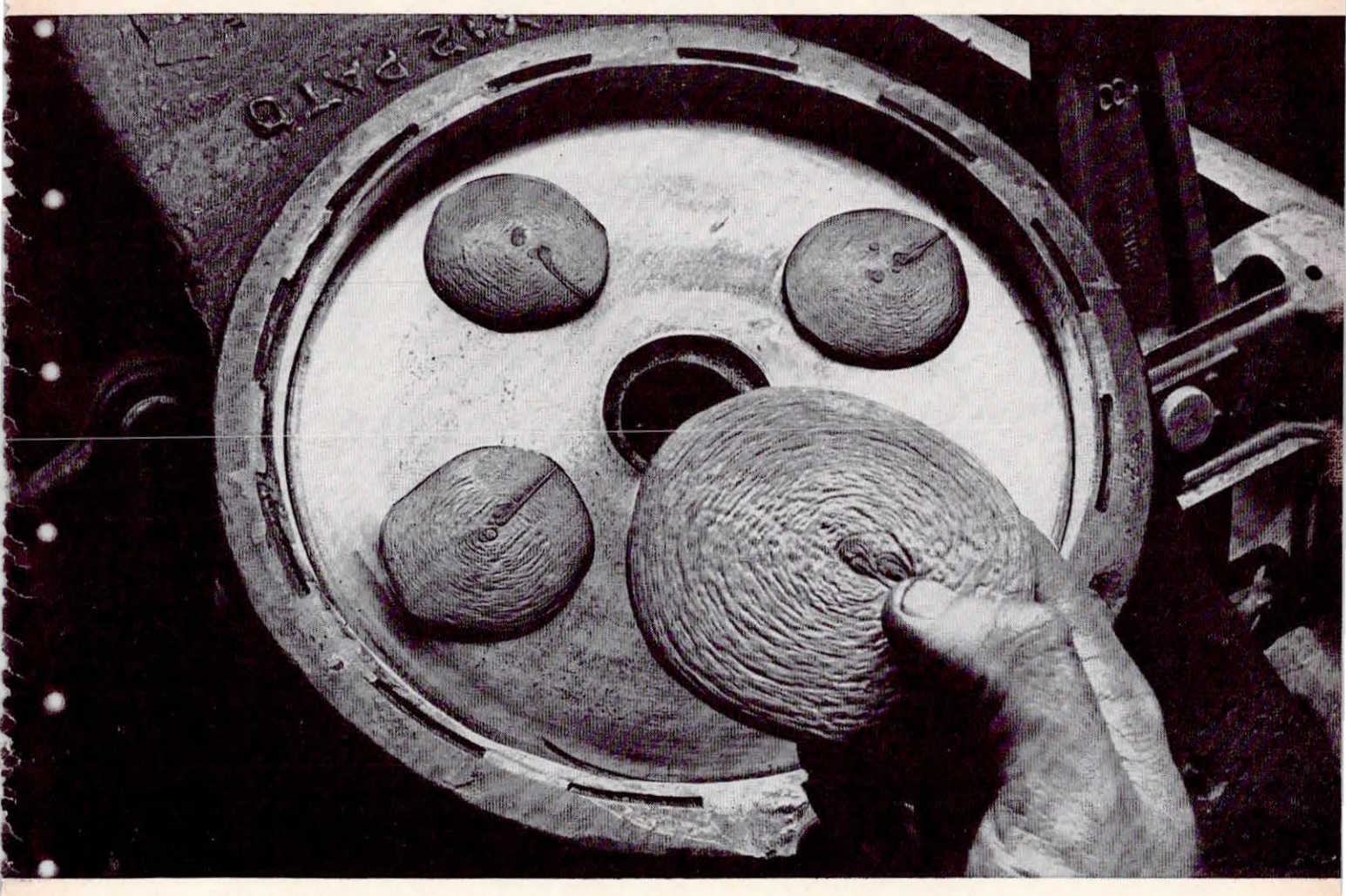
. . . WILL STRESS POLICY, ECONOMICS, TECHNOLOGY

Within the CTC research organization will be a transportation policy unit, an economic research and forecasting unit and a science and technology unit. If the Canadians do what they say they are aiming to do, DOT may have to look to its laurels. Particularly in the area of economic research and forecasting, CTC has goals which—if reached—will take Canada a long way toward development of a transport system which serves both the providers and the users well.

CANADA'S FINDINGS: HOW WILL THEY COMPARE?

Canada may fail, in trying to develop or redevelop current and future "national transportation policy." But she may succeed—and the way the Canadians are going into the project does give hope for success. Somehow, Canada already seems to have a more integrated transportation industry than the U.S. Now, Canada is taking new looks, new steps. Comparisons of new policies, Canadian and U.S., may not always be fair—but they will, no doubt, be made.

Shell invents centerplate lubricant discs.



Those little black discs that look like burnt hotcakes will effectively lubricate centerplates on your highest-capacity cars.

In a test we set up with a major railroad, Shell Centerplate Lubricant Discs were installed in 100-ton coal cars. Result: After one year's service, load-bearing surfaces were uniformly polished—no evidence of galling.

No mess. No risk. No guesswork.

Four discs are placed in each centerplate (see photo above). Or the discs can be slipped into place with a long-handled paddle. Clean, quick, safe.

Each disc contains a measured amount of molybdenum disulfide in a special binder. So the centerplate always gets the right amount of lubricant in the right places. And the special binder controls spreading under pressure—no squeeze-out.

Get details.

Shell Centerplate Lubricant Discs are allowed under A.A.R. Interchange Rule 61. They're available now, and your Shell Railroad Representative has complete details. Or write for brochure, Shell Oil Company, Dept. RO/W, P. O. Box 1890, Trenton, N. J. 08607.

MEMBER RPI RAILWAY PROGRESS INSTITUTE

SHELL

Circle 6 on coupon page 34

RAILWAY AGE
THE TRANSPORTATION WEEKLY

July 22, 1968

WEEK AT A GLANCE

LBJ gets bill to curb transport by farm co-ops

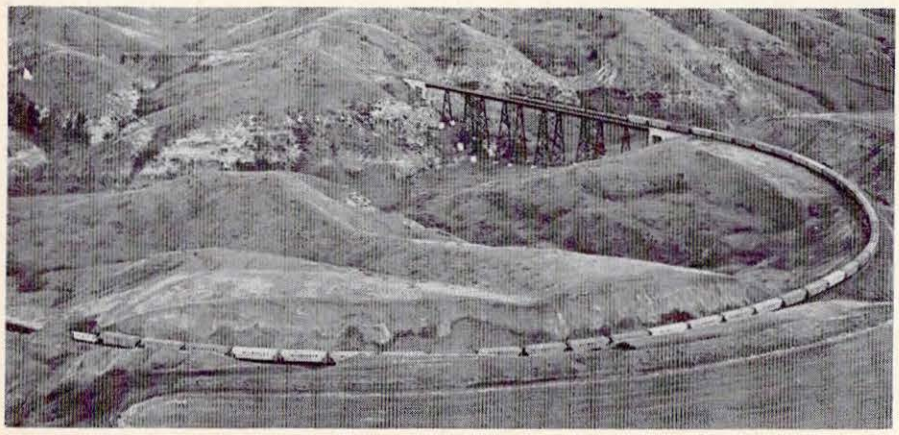
Congressional action was completed last week on proposed legislation to limit the amount of unregulated for-hire transportation performed by agricultural cooperatives for shippers who are not their members.

The final Capitol Hill clearance, which sent the proposal to President Johnson, came when the House passed without amendment a Senate-approved bill, S-752.

The proposed legislation was inspired by court decisions which have the effect of holding that the Interstate Commerce Act's exemption for agricultural cooperatives permits them to remain unregulated while hauling for non-members as much as 49% of their total traffic.

This would be cut to 15% in terms of tonnage if President Johnson signs the bill into law.

A big user of the co-op service has been the Department of Defense, which thus "abuses" and "fouls up the whole transportation system in the country," as it was put in the House debate on the bill.



"Golden Grain Train" heads for the ports

Snaking through the hills of Montana near Great Falls, the Milwaukee Road's "Golden Grain Train" is bound for the North Pacific Coast ports of Longview, Seattle and Portland, with 135,000 bushels of Montana grain.

The 40 covered hopper cars were loaded from a single elevator and dispatched from the facilities of the Western Grain Exchange at Great Falls for the ports and export to the Far East. Russell Woolcock, president of the WGE, called the train an experiment.

"Montana grain growers and shippers will not take a back seat when it comes to experimenting with and developing new marketing concepts for grain. If we can establish the feasibility of this type of trainload movement for the grain export trade, then we should be able to compete much more effectively."

Chicago plans for consolidation of stations—again

Chicago Mayor Richard J. Daly isn't giving up on his proposal for consolidation of three rail passenger stations on the city's South Side. The mayor reraised the decade-old issue at a recent Western Railway Club appearance (RA, April 29, p. 82). Then, last week, he met with top officers of the roads using the stations. Result: a committee is being formed, with Clair M. Roddewig, president of the Association of Western Railways, as chairman. Represented on the committee will be Santa Fe, C&O/B&O, Monon, Grand Trunk Western, Chicago & Western Indiana, Erie Lackawanna, Chicago & Eastern Illinois, Rock Island and Norfolk & Western. Stations involved are Dearborn, LaSalle Street and Grand Central.

TCEU, carriers reach agreement

The Transportation - Communication Employees Union has become the fifth of the non-operating unions to sign a wage-rules agreement calling for a moratorium on new demands and a no-strike clause stretching forward to Jan. 1, 1970. The settlement will give TCEU members (about 25,000 railroad employees) increases of 3.5% July 1; 2% Jan. 1, 1969, and 3% July 1, 1969. Also included are improved vacation and holiday rules and the creation of a classification and evaluation fund to be used for adjustment in inequities in the pay structure. Similar settlements were reached earlier with the Brotherhood of Railway and Airline Clerks, the American Train Dispatchers Association, the Brotherhood of Maintenance of Way Employes and the Hotel and Restaurant Employees and Bartenders International Union.

Congress advances fast-train bill

Proposed legislation to extend the Department of Transportation's High-Speed Ground Transportation Program has continued to move in Congress (RA, July 15, p. 25).

Lack of any substantial opposition was pointed up when the House, on July 12, passed the extension bill, H. R. 16024, without a record vote and without much debate. And the Senate's Surface Transportation Subcommittee held hearings last week on the Senate's similar bill, S. 3237.

The program, which includes the Northeast Corridor demonstration of fast train service between Washington and New York and New York and Boston, is now scheduled to expire Sept. 30. As cleared by the House, H. R. 16024 would set back this expiration date for nearly three years—until June 30, 1971.

Much of the relatively brief House debate pointed up misgivings of some Congressmen about provisions in the bill to authorize DOT to contract for suburban stations in the Northeast Corridor and to acquire testing sites and build support facilities for the program's research and demonstrations. In supporting the Senate's bill at last week's hearing, A. Scheffer Lang of DOT's Federal Railroad Administration said the suburban stations "are considered an integral part of the planned demonstrations and the test facility is required because for planned tests of new systems we need a great deal of land and relative isolation to assure non-interference."

Among other supporters of the extension bill was the Railway Progress Institute. Robert M. Coultas, chairman of the Institute's Committee on Passenger Traffic, filed with the Senate Committee a statement calling the program "a genuine partnership of government and industry."

GUS WELTY

LINES ON LABOR

"THERE WERE FEWER employees in January 1968 than in any other month since reports were first required by the Interstate Commerce Commission in 1921." So begins a recent "monthly comment" from the ICC's Bureau of Economics. The rail employment figure for January was 582,-742. It has risen since, but it's still well below even last year's levels.

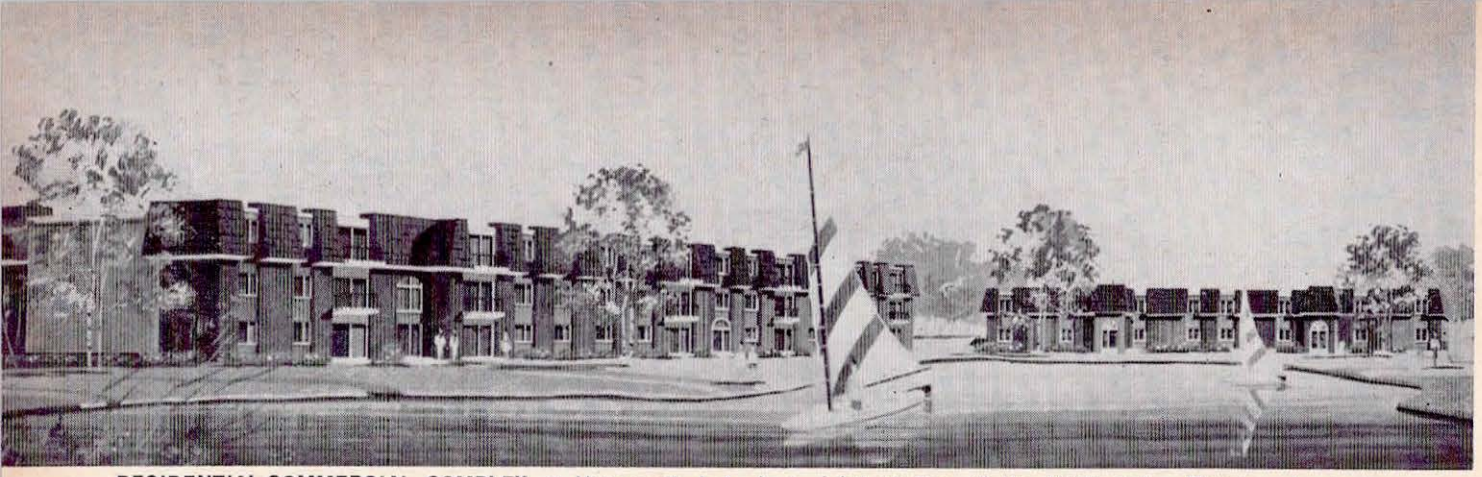
EMPLOYMENT HAS DROPPED in the face of every effort union leadership has made to maintain it, through job-stabilization demands, through merger call-backs, through restrictions on contracting-out of work. Organized labor, clearly, has not succeeded, over-all, in its efforts to prevent railroads from eliminating jobs.

WHAT COMES NEXT? Perhaps a realization by the rank-and-file and, hopefully, by union leadership, that the old ways have not worked—and that new approaches are needed. The realization is overdue—but its coming would still not be too late.

UNION LEADERSHIP, some people think, is trapped by its own rhetoric—that is, union leadership has been so outspoken in its opposition to management that it is extremely difficult to change course now, even when all logic indicates that a change in course is not just desirable but necessary.

HOW CAN CHANGE COME, though, when union leadership's message to the rank-and-file has followed such a consistent pattern: Railroad managers are not to be trusted, railroads are mis-managed and mal-managed, railroads are out to give the worker the worst of every deal, railroads are run by people who speak with forked tongue, and so forth. It's tough to change, with that background. But, some say, the union message will have to change—because the present message is not only destructive of the industry but also of rail labor itself.

THE TRUTH, somehow, will filter through to the rank-and-file. It comes, in diluted and soft-spoken fashion, from some company publications, but it has to come, too, from the publications which rail labor puts out. It isn't a question of labor's publications becoming shills for management. It is, rather, simply a question of truth and balance in reporting. Truth is truth. There isn't one for management, one for labor.



RESIDENTIAL-COMMERCIAL COMPLEX at Hammond, Ind., is a joint venture of the N&W and a Chicago developer.

Consumer property pays off

Norfolk & Western announces real estate projects for residental and light-commercial use.

Railroads can diversify into the real estate business in a number of ways—and Norfolk & Western may be pioneering in the method most suitable for most roads.

Not every road has the prospects of a Penn Central or an Illinois Central for cashing in on prime-property air-rights development. Not every road will be able to follow PC's lead in making major off-line real-estate investments. But it is a rare railroad, especially in this age of merger, which doesn't find itself with property that (a) isn't needed for rail operations, and (b) doesn't lend itself to the traditional kind of rail-oriented industrial development.

N&W is aiming to make that kind of property pay off—by devoting it to residential and light commercial use. Two projects are in the works, one in Indiana, the other in Missouri.

● **N&W begins.** Early this year, the railroad announced a cooperative project in Hammond, Ind., which will involves investment of $18 million for construction of 1,320 garden apartments, a shopping center, an industrial park and a recreational center on an 84-acre railroad-owned tract.

That created a stir. But it was only a beginning. N&W had a far bigger project coming—and in April, the railroad unveiled a five-year, $100-million building program which will convert 1,200 acres of railroad land north of Kansas City into a whole new community, to be called Seven Hills North.

Even this major undertaking may be topped later. N&W, says President Herman H. Pevler, will be developing property in a good number of the cities it serves along 8,400 miles of line stretching from Kansas City, St. Louis and Chicago to Tidewater.

For N&W, real-estate development is a partnership matter, not a go it-alone affair. In Hammond, the railroad is working with developer Gerald W. Fogelson of Chicago; at Claycomo, Mo., N&W's partner is Glenn P. Boehm, a Slayton, Mo., real estate developer.

● **How cooperation works.** In Hammond, apartments will rent for $150 to $300 per month. Generally, N&W and the developer are in the project on a 50-50 basis, from the beginning. Each is putting up half of the required interim financing, each will receive 50% of the proceeds of the venture.

James E. Carr, N&W vice president-taxation and real estate, notes that the developer "will guide development of the residential part of the project as well as the industrial, working closely with the railway company with respect to industrial work. The developer is the manager of the project, using N&W as a consultant. There will be no outside consultants, except perhaps for special problems."

Similar arrangements will cover the Kansas City development, which is scheduled to be progressed in several stages. First phase will be construction of 1,836 apartment units, a shopping center and a complete recreational complex on 150 acres. Apartment construction will represent an investment of more than $27 million. Units will rent for $150 to $250 per month.

Later, the developer will fill out the rest of the tract with high- and low-density residential building, and there will be a regional shopping center, schools, churches, parks, medical facilities, a community center and a light-industry park.

● **More than just a suburb.** N&W, the developer and architect Charles Edmond O'Keefe will be working hard to make the development something other than a stereotyped bedroom suburb. Seven Hills North, they say, "will be a different kind of 'total development' with emphasis on housing and recreation in a park-like setting, with commercial facilities conveniently located to serve the new community. Development will take advantage of the wooded, rolling terrain—which will be disturbed as little as possible by grading.

"Clusters of apartment buildings will be located in a random but actually carefully controlled arrangement through the initial 132-acre development. In order to avoid a static look, a variety of architectural styles will be used—with landscaped and wooded areas establishing a peaceful relationship between styles of design. The complex will be designed to offer the advantages of a private home without the usual responsibilities, and the facilities of a country club without any of the inconveniences."

Apartment units in the first-phase project "will be divided into separate 'villages,' each with its own style of architecture—to please renters from any part of the country who might be moving into the Greater Kansas City area."

● **Two kinds of profit.** Based on the reaction thus far, railroads following N&W's lead may find themselves not only with financially profitable ventures but also with side benefits from community approval generally.

Already, for instance, the Kansas City Star has lavished praise on the Claycomo, Mo., project. In the post-war era, the newspaper noted, subur-

(Continued on page 24)

TELEVISION CAMERAS scan documents and record them on videotape, ready for instant playback.

Can videotape change the waybill picture?

The SP's rapid-fire electronic system for filing and retrieving waybills may prove a boon for all railroads snowed by paperwork.

Southern Pacific is investing $750,000 in an information system that really deserves the term "space age"—an Ampex Videofile system designed to streamline the massive job of storage and retrieval of waybills.

The problem is simply put by Ampex: "Modern business has embraced electronic data processing with space-age speed—but when it comes to filing important papers, the method remains strictly horse-and-buggy."

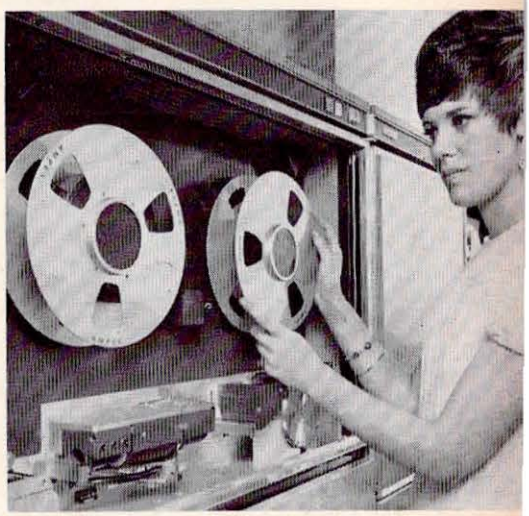
Not so, now, for SP. The Videofile installation—first commercial application of the system not just on a railroad but anywhere in U.S. industry—will give Southern Pacific capability to:

—Store more than 20 million documents on videotape.

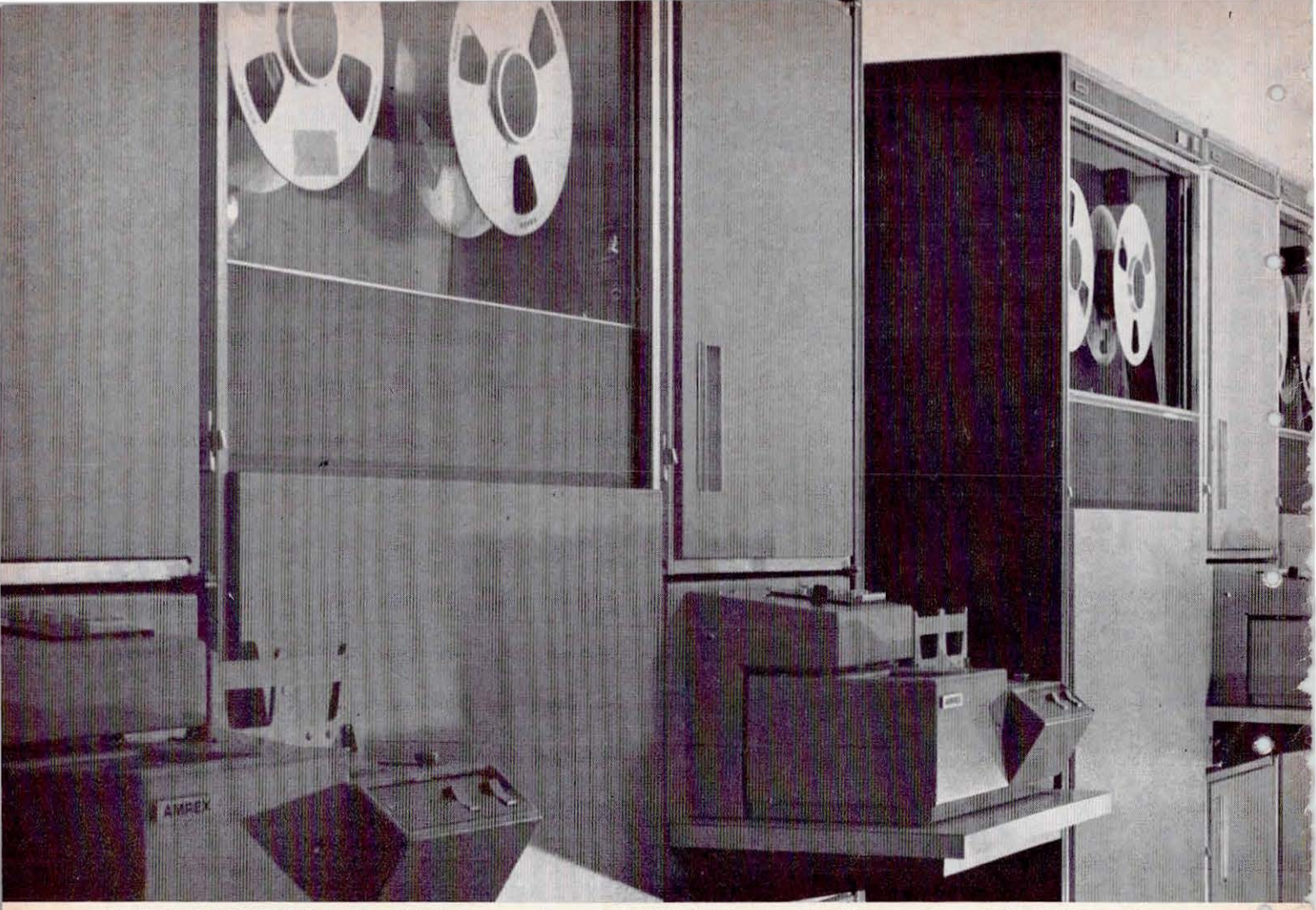
—File waybills at an average rate of one every 10 seconds.

—Retrieve bills at an average rate of one every six seconds.

● **Volume plus speed.** Both the ca-



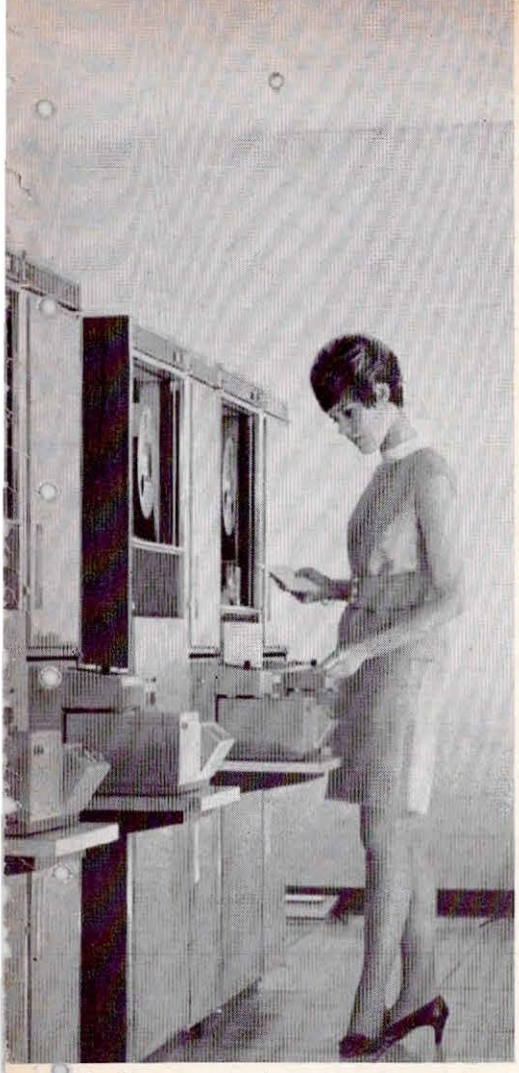
A SINGLE REEL of two-inch-wide videotape, 3,600 feet long, can store up to 125,000 documents.



TO FIND A DOCUMENT on the videotape, a card punched with the document address code is fed into the card reader mounted

A SPACE-AGE FILING OPERATION THAT SAVES OFFICE SPACE

THE LOCATED DOCUMENT on videotape can be reproduced on photo-sensitive paper via magnetic recording.



on the tape transport.

pacity and the storage/retrieval speed are vital elements. Waybills must be kept for four years. On SP, addition of new waybills, abstracts and corrections to the file can run to 400,000-plus per month. Requests for information contained in the file are expected to average about 100,000 per month.

With the new system, SP can more than keep up with the information flow—and it's doing it at a substantial savings in space: Videofile requires only 1,000 square feet of office area, conventional paper files required eight times as much.

Here's how the SP installation works. For storage operation, a recording operator first places the waybill or other document on a glass plate. Underneath the plate is a television camera which scans the document and converts its image to television signals. As a double check, the document image is also displayed on a television monitor in front of the operator.

The television signals are sent through a central control unit—actually a small computer—to one of eight large tape recording-and-playback transports and recorded there on magnetic videotape. The process, Ampex points out, is what the average television viewer would know as "instant replay" video recording.

While the television signals are being sent through, a second set of signals—in computer language—is also being transmitted to the tape transport. These signals, making up a digital address code, are key-punched in by the operator. They're recorded on the tape just in front of the document recording, to serve as identification for document-retrieval.

● **Fast search, retrieval.** In the retrieval operation, normal practice involves use of a punched card bearing the address code of the desired document. The card is fed into a digital card reader mounted on the tape transport. The reader tells the central control unit what address it has read and, on command from the control unit, the tape transport locates the document through a high speed search through the tape. Search speed of 380 inches per second, Ampex says, is twice that of computer-industry tape transports.

Once it's found, the document recording is played back by the transport into a buffer system. There, a metal disc magnetically records the incoming signals, thus duplicating the document recording. The disc then plays these recordings back into a special printing device which produces the document image in hard-copy form.

Since the magnetic disc merely duplicates the original document recording from the master file, SP gets an important side-benefit: No file entry is ever "out-of-file" to other requests for it which may be made at any time.

● **Advanced TV electronics.** To meet SP's specific needs, Ampex says, "advanced television electronics were built into the Videofile system.

"Since television images are 'written' with horizontal scan lines, more scan lines mean more detailed resolution of the picture. Good resolution is essential in handling waybills and abstracts which arrive in SP's San Francisco office from all over the country. Bills are often soiled or wrinkled. They're often very hard to read, much less reproduce clearly. To achieve the resolution required by Southern Pacific, the Videofile cameras were built to provide twice the number of scan lines used in home television sets—1,280 lines vs 525 lines. This is a capability equalled only by the most precise spacecraft television cameras.

"Cameras also can sense and interpret light areas on the image by means of an electric eye, and they can compensate to ensure that the document recording will convert back to a copy which will be uniformly clear and readable. Using built-in signal-strengthening electronics, the cameras emphasize the weakly-shaded areas to keep them in balance wtih the darker areas of the image."

High resolution factors built into the picture by the camera, the manufacturer notes, "are reflected in the quality of the paper facsimile produced by the printer, as a television tube in the printer reproduces the stored image by electrically printing scan lines on photo-sensitive paper."

The printer looks much like a standard office copier, but there are operational differences. No prior paper-handling is required in producing copies. And the signals representing requested documents are fed to the printer automatically from the buffer, to produce clear copies at a rate of 20 per minute.

● **System make-up.** Southern Pacific's system consists of six filing consoles, eight videotape transports, one facsimile printer, two video storage buffers and the system control unit.

About 125,000 document recordings can be stored in 3,600 feet of tape on a 12-inch tape reel. A comparable number of paper documents would require 12 four-drawer file cabinets for storage. Thus, with the new system, SP can store all waybills and related documents for a month on three or four reels of the two inch-wide tape. Reels are filed by month and type of document in a tape library, from which they can be quickly pulled for mounting on a tape transport when retrieval is necessary.

Filing is limited to 8½-by-11-inch documents per frame, but documents longer than 11 inches can be taped in sections.

Properties of magnetic tape, Ampex points out, permit addition of documents to existing tape wherever and whenever desired. Documents can also be erased, relocated or replaced within the file without disturbing or altering the rest of the file.

Southern Pacific's requirements were satisfied by addition of new entries at the end of existing tapes. But the system can also be programmed to function with a category filing system. Selected categories of information can be recorded on specific sections of the tape for rapid retrieval of like documents. In such a program the buffer could temporarily record and sort input data by category before filing. Further system flexibility permits use of monitors and/or printers at locations remote from the central filing/storage office. ■

BURLINGTON's second-generation customer service vans are smaller but more powerful than predecessors—and more maneuverable.

Freight stations on wheels

Many railroads like the idea of being able to drive the freight station around to the customer's door—so more of them are getting equipped to do it.

MISSOURI PACIFIC's mobile service centers are designed to boost the road's image and improve agent's performance. The vans are radio-equipped.

Railroads are coming up with the best answer yet to a years-old customer-service problem: How to continue to provide efficient—and economically sound—service to the small shipper in the small town, in an era of mass-production transportation. The answer: Put the smalltown station—and the agent—on wheels.

Burlington's experiment with freight-stations-on-wheels (RA, Nov. 20, 1967, p. 15) has proved so successful that the railroad is planning six more routes for its mobile offices. Missouri Pacific is drafting an even broader, wholesale application of the plan. At least nine other roads are watching—and planning. It's all part of the effort to salvage—and improve—branch lines by moving the freight office right to the customer's door.

There are two main maneuvers in the salvage campaign—cut costs, and brighten faces. The costs are those of maintaining little-used stations. The faces are those of customers who are getting better service and a new railroad image—and also those of the agents who have been freed from the stifling atmosphere of the old, musty depot.

● **Costs drop.** Burlington branch-line costs definitely have dropped since the plan started working on four lines at various times in 1967, according to Richard G. Johnson, general manager-lines east. He says his original estimate of first-year savings of $15,000 for each route has held up. He can take special pride in those results: Johnson became the draftsman of the plan, after a 1966 look at branch operations convinced him a radical change was needed to cut costs without cutting service and to make fuller use of branch-line agents.

Does the dollars-figure mean the salvage process really worked? Can branch lines survive, with the help of the traveling offices? Comparing the situation now with the 1966 picture, Johnson says yes, at least for a longer time than was possible before.

"Now the chances are greater of keeping branch lines in operation for a longer period of time because of the reduction in expenses. To the extent that you can reduce costs and still provide adequate service, you can decrease by that much the chance of abandonment," Johnson says.

However, he warns that the mobile-van idea is not a cure-all: "You still have to relate expenses to revenue. You can support a branch line only if

you have less expenses. If you can break even, there is no basis for abandonment. The vans have tended to permit us to continue borderline branch-line operations."

• **How it works.** The plan works as follows. On each branch, one station is selected as the base for the office-van's movements. From this base the van covers a regular daily route that may include four or five other depots. A full-time agent remains at the base, and a mobile agent takes on the duties of the agents from the stations on the route. The terms of agent displacement were worked out between Burlington and the Transportation-Communication Employees Union.

Under this plan, the vans replace one more station than agents. On each branch, average savings include $12,000 from agents' salaries (two) and $3,000 from station maintenance (three). Balanced against this, of course, was the initial $26,000 cost for four vans.

Viewing cost-cutting as the major plank in his campaign, Johnson says, "In presenting this concept, I didn't attempt to justify it on the basis of increased traffic. Growth in these branch-line areas is limited. While there is a potential, it's not great enough by itself to justify this operation."

• **Shippers approve.** Whatever the growth potential may be, Burlington agents now have a better chance of exploiting it. That's because their customers are experiencing a new kind of personal, door-to-door service, and "it's been accepted unanimously," Johnson says.

One of those customers with a brightened face is Quin Torri, manager of the Torri Grain Co. at Compton, Ill.: "We're getting a lot better service now. We're getting cars easier than ever before. Their agent is doing a lot better job than in the past. We get results right away, especially when we check on cars that haven't showed up. They seem to be taking care of this branch now."

Torri is so enthusiastic about the plan that he accepted Burlington's request for his testimony before the Nebraska Commerce Commission for proposed routes in that state.

Another happy shipper is Bill Morrow, partner in Joy Feed Mills, Joy, Ill. While Morrow says the best thing always would be to have an agent nearby, he adds "within 15 to 20 minutes we can find him." And if necessary, the Burlington man will be there soon after for an unscheduled visit. Comparing the present situation with the past, Morrow says "it's faster this way," because he doesn't have to leave his office: "It's more convenient. It seems to be working out real well and I see no reason for change."

The agent to which Morrow referred is Clifford A. Meadows, who's quick to comment on the morale-boost resulting from the new routine: "I'd rather be driving than sitting in the station all day." He likes the freer, more personal flavor of his job. He reports that the operation continues smoothly in its second year. Meadows covers four stations from his base at Aledo, Ill. He's been steering a bright red-white-black van through the area since February 1967.

• **Burlington's new routes.** Burlington now is working out the details of six new moving-office routes. Two new vans have been delivered and will go into service around bases in southern Iowa and northern Missouri as soon as clearance comes from the state commerce commissions. Four vans are on order for two routes in Nebraska and two routes yet to be selected.

Fully-equipped vans

This "second generation" van fleet will consist of smaller, more powerful vehicles. For one thing, Burlington decided to remove the customer's couch from the new models. The reason? The customers never used it because the agents were performing their duties fully by going directly to the customer's desk after parking at his door. The new models will weigh 4,850 pounds, compared with 5,750 pounds for the older ones. And they'll have V-8 engines instead of six-cylinder ones. All this is expected to cut wind resistance and provide greater maneuverability.

The four original routes in Illinois cover a total of 305 miles. The new ones in Iowa and Missouri alone will cover 231 miles. As with the old vans, the new ones will carry complete freight-office equipment, two-way radios, heating, air conditioning (controlled from the dashboard on the new models) and "pop-out" windows with tinted glass. Total cost for the new fleet is an estimated $37,000.

• **MP maps routes.** Another road taking the mobility plunge is Missouri Pacific. And it's a big plunge. While MP's plans for use of the traveling stations vary in degree of development, they represent a definite and wide-ranging wholesale commitment.

MoPac's operations will start in Kansas, where hearings already have been held before the Kansas Corporation Commission. Approval is expected soon. In that state alone, 20 routes would be established that would cover 110 communities. Hearings also have been completed in New Mexico, and preparations for filing in two other states are under way.

The wide-scale plan follows a successful experiment with three routes in Louisiana. MP industrial engineers foresaw the mobile office plan as a logical outgrowth of a previous move to consolidate depot coverage under fewer agents who served them by auto.

For Missouri Pacific, the same reasons hold as for Burlington: Lower costs and better service, "the very good economies in it," says an MP man.

• **Public relations, too.** Painted white and displaying the red Missouri Pacific buzzsaw, the vans are also viewed as important public-relations tools.

One feature of the MP mobile service centers, as the vehicles are called, is two-minute communications in most cases. The vans will operate around base service offices, of which the majority will be open through a free Enterprise telephone exchange. And both the base offices and the moving offices will be radio-equipped. The vans' office area will include a built-in desk, typewriter stand, utility counter, file drawers, padded couch, walnut-paneled walls, and tan, pebble-patterned vinyl tile.

Missouri Pacific currently is working out job-protective provisions for all agents to be affected by the plan. Initial savings from station closings haven't been estimated yet.

• **Other roads coming in.** From various sources, there are indications that at least nine more railroads are considering the mobile-office concept with varying degrees of intensity. These include Illinois Central, Canadian National, Union Pacific, C&O/B&O, Norfolk & Western, Southern, Frisco and two other Chicago-based roads.

Illinois Central "is giving serious consideration," but has no definite plan ready for announcement, according to Louis B. Marzoni, director of stations and also director of freight claims prevention and perishable freight.

Generally, the same holds for the other roads, most of whom have studied the Burlington operation carefully. Southern now is planning an experimental operation in several southeastern states.

Is the interest already displayed an indication that the mobile-office idea is about to mushroom in the industry? One railroad man answers like this: "Obviously. We're studying it now—and we weren't, six months ago." ■

Great

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Circle 7 on coupon page 34

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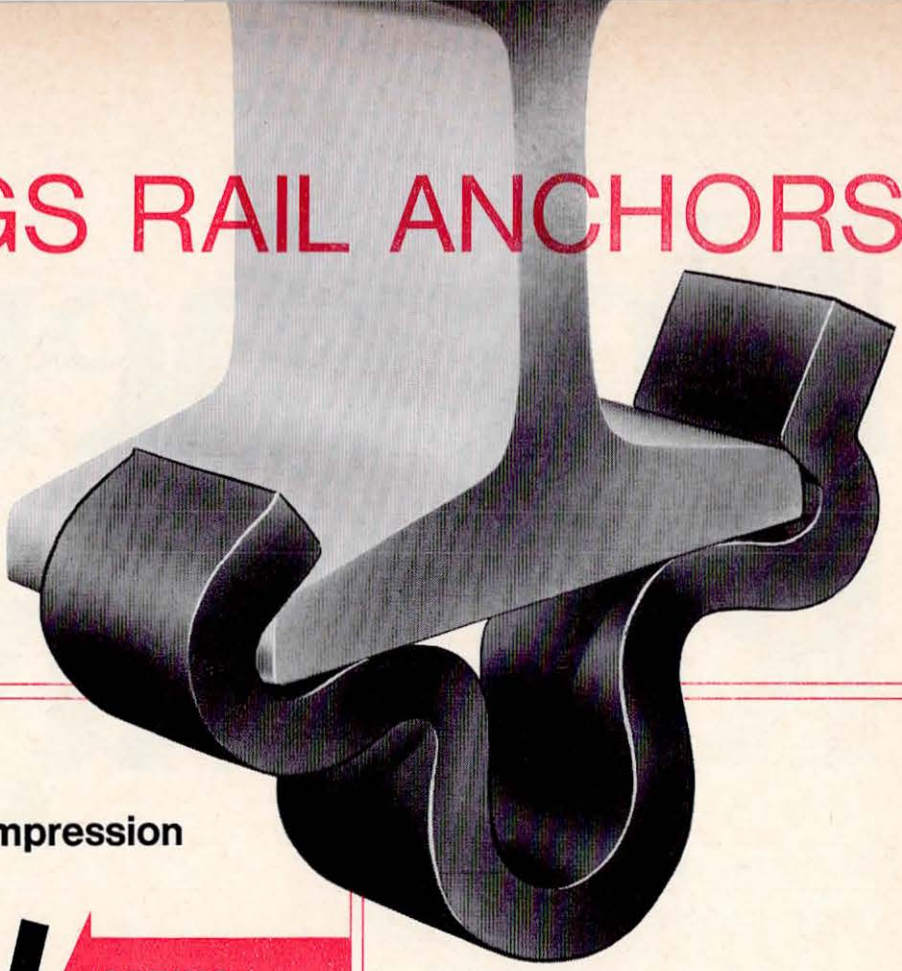

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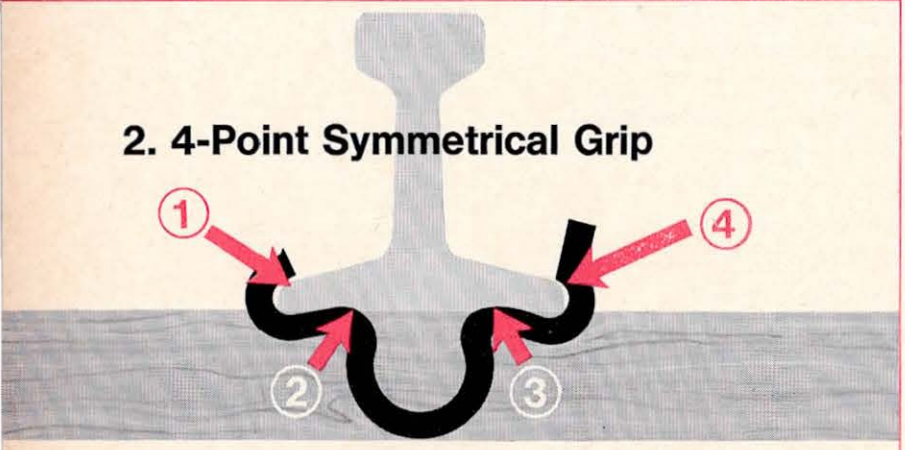

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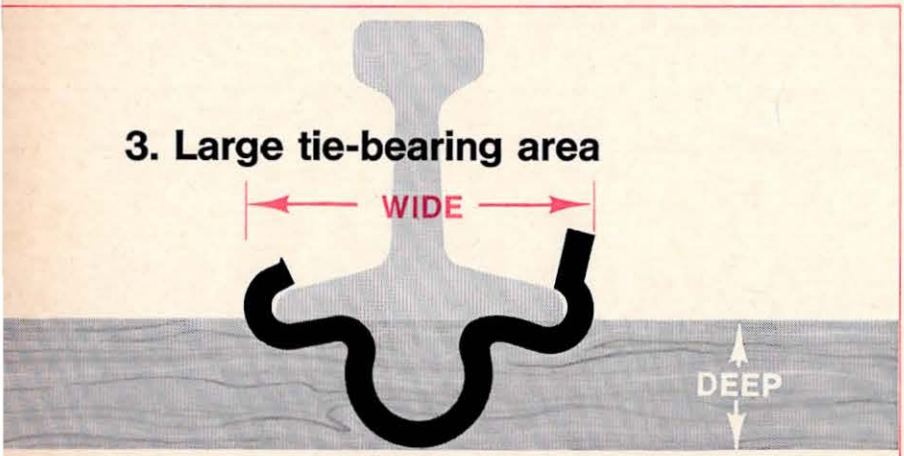

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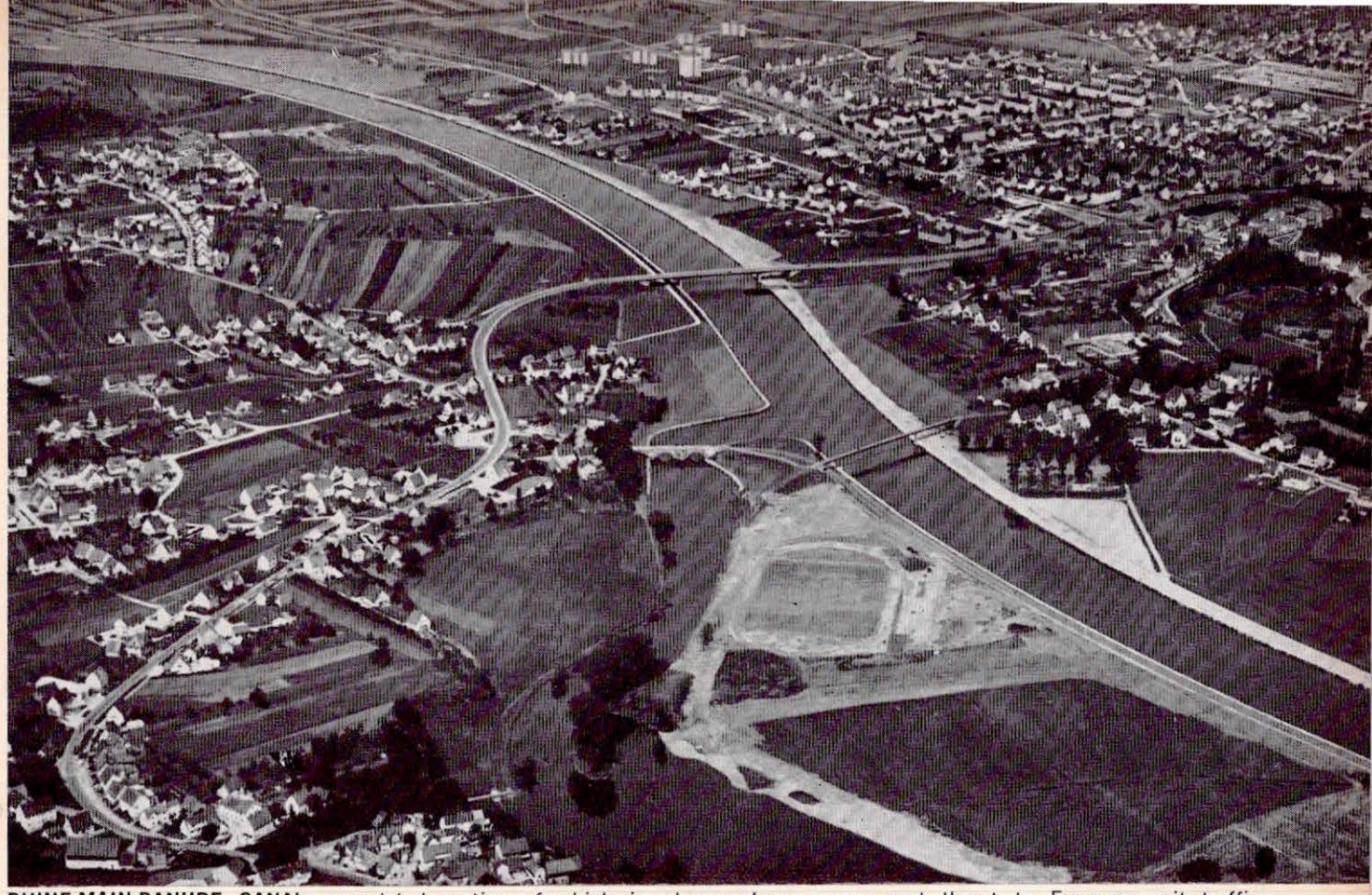


RHINE-MAIN-DANUBE CANAL, completed portion of which is shown above, poses real threat to European rail traffic.

EUROPE:

Barging toward trouble?

Is government subsidy of competitive transport modes a cross borne only by the privately owned railroads of North America? The following report from International Editor John Levett, in London, describes the costly development of "cheap" waterway transportation in Europe, where all major railway systems are nationalized and nearly all operate at enormous losses charged off to taxpayers.

How hard is rail traffic likely to be hit when great canal projects planned or already under way in Europe are completed? Assessment of the damage which could be caused is now being considered by several railway managements. And German Federal Railways (DB)—likely to face the strongest challenge—is waging a vigorous campaign to deflect waterway competitors from profitable traffic areas.

Competition from barge lines is already intense for some traffic in several countries. By 1981, when the Rhine-Main-Danube canalization project should be completed, the situation could become critical.

In the Communist bloc of Europe, where all forms of traffic are highly integrated, the problem does not exist on the same level. But even there, some railway men must be having private misgivings as the development of waterways seems likely to draw more and more bulk traffic from railways.

In central and west Europe barge line operators are certainly in a strong position. They have one built-in advantage—they have no real infrastructure costs. While railway managements must include in their tariffs a proportion of the cost of construction and maintenance of the infrastructure, this plays little or no part in setting barge tariffs. Almost all canal and river costs are borne by the community.

On the other hand, European railways offer the increasingly important advantage of fast and regular service—even during the winter months when many waterways are iced over. And railway managements are likely to use this advantage with great effectiveness in the fierce battles ahead.

Certainly they are not prepared to sit back and calmly watch bulk traffic drain away to the barges. DB, for one, has already taken counter-measures to inhibit waterway development where good rail services are already available.

● **Linking the Rhine and Danube.** All the important canalization work which will eventually link the Rhine with the Danube, via the river Main, is being carried out in Federal Germany.

The Main is being canalised from Aschaffenburg eastwards to Bamberg. From Bamberg, a new canal is being driven some 105 miles southwards via Nuremberg to Kelheim, about 15 miles southwest of Regensburg on the Danube. The Danube itself will be canalised between Kelheim and Jochenstein on the Austrian frontier.

The project covers a route length of about 422 miles and includes 50 sets of locks and sluices. It will create a single waterway of more than 1,900 miles—stretching from Rotterdam to the Black Sea—suitable not only for barge lines but also for ships of up to 1,500 tons. The first 20 miles of the new canal were opened to shipping last March.

Ships of 1,500 tons can already

COST OF THE PROJECT WILL EXCEED $600 MILLION

reach Hausen from the North Sea in all seasons. By 1970 the way will be clear to Nuremberg, and by 1980 to Regensburg.

Total cost of the project was originally estimated at $600,000,000—but is likely to be considerably higher before work is completed. Finance comes partly from interest-free loans from the German Federal Government and the State of Bavaria, and partly from interest-bearing loans raised by the Rhine-Main-Danube company in the capital market. Repayment of capital and interest will probably be made from profits to be made by power stations along the route.

Though the Rhine-Main-Danube link dwarfs most other canal projects in Europe, other developments could also adversely affect rail traffic. Work in hand or planned includes a link between the Rhone and the Rhine (France); a Meuse-Rhine link (France); improvement of the Dunkirk-Scheldt link (France-Belgium); canalization of the Moselle above Thionville (France); Oder-Danube link (Czechoslovakia); link from Lake Maggiore to the Adriatic (Italy); canalization of the Danube at the Iron Gates (Yugoslavia-Rumania); and development of the Elbe, with a link from Hamburg to the waterway network of northern Europe.

● **Areas of conflict.** For all waterway traffic, the availability of transport into the hinterland is of decisive importance. For this reason some railways —in particular, the Austrian Federal Railways (OBB)—feel that completion of the Rhine-Main-Danube link may even bring important benefits. Railways will certainly be needed to carry bulk traffic to and from the inland ports.

But important areas of conflict, already existing to some extent, will develop. This will be particularly evident where railways and waterways follow almost exactly the same route, as will be the case in Germany.

Minerals, coal and coke, agricultural products, chemicals and fertilizers are commonly carried by both barge lines and railways in Europe. Greatest competition is for bulk loads of 350 tons or more.

Belgian National Railways see waterways as a dangerous competitor for this type of traffic—and the commercial battle now being waged by the system is aimed primarily at conserving its existing traffic. In some cases in Belgium traffic has been won from waterways.

What is happening in Belgium is typical of some other European countries. Total railway traffic there declined from 66,594,000 tons in 1964 to 59,313,000 tons in 1966—while waterway traffic increased from 75,308,000 tons to 77,595,000 tons.

Traffic in which waterways scored over railways in Belgium in 1966 included agricultural products (waterways 7,070,000 tons, railways 1,633,000 tons); building materials and quarry products (26,715,000 tons against 6,948,000 tons); chemicals (7,395,000 against 3,608,000), and industrial oils, pitch and tar (15,526,000 to 795,000). But strong competition also exists in fuels, ores, iron and steel products and other goods.

In Austria, Danube traffic consists predominantly of coal and ores from the Ruhr (shipped at Regensburg) and East Europe to Linz. Downstream traffic consists largely of fertilisers, though the Danube Navigation company also has a substantial tanker traffic in petroleum, crude and fuel oils.

German barge-line traffic

In Germany sand, gravel and construction materials are the most important traffic (from a tonnage standpoint) carried by barge lines—in 1965 more than 63,000,000 tons were carried, compared with 36,000,000 tons carried by railways. Waterways also had the edge on railways in transport of petroleum and oil products (32,943,000 tons to 23,813,000 tons), and cereals-5,755,000 tons to 3,066,000 tons). They also carried important tonnages of hard coal and lignite, ores, pig iron and crude steel, scrap metal and fertilizers.

● **Railways fight back.** Railways are fighting to retain traffic against the encroachment of the barge and tanker operators. Few managements have any illusions about the motivation behind waterway development campaigns.

A spokesman for the Belgian National Railways (SNCB) says: "The effect of carrying out a program of costly improvement of waterways—without evaluating its commercial viability—will have the effect of preventing SNCB from getting a share in the general development of traffic, and could make railways lose traffic in certain instances.

"It will certainly make us lose revenues by forcing us to reduce tariffs to fight against waterway competition.

"It is important to note that certain pressure groups are urging the improvement of canals with two aims: a) to make the community carry a greater proportion of transport costs, and so reduce direct charges to the user; and b) quite simply to use the waterways to force the railways to reduce their rates."

Despite an active commercial policy, SNCB finds it difficult to resist these developments. State-owned systems are seldom able to exert the political pressures required to meet the political thrust of private commercial interests.

In Germany, however, DB is waging a fierce battle on all fronts, with several successes already notched up.

First and foremost, DB spends heavily on advertising its commercial efficiency and the recent leap forward in handling methods and freight-train speeds. The sales staff does not hesitate to point to the winter of 1962-63, when most inland waterways were closed for long periods by ice.

The sales staff points, too, to the fine range of special cars, many with self-discharging equipment, which help to keep transshipment charges to a minimum—a distinct advantage over barge transport.

If these factors are not enough to win a potential customer or keep an existing one, DB is always prepared to take up the price challenge. Here the railways are at a disadvantage, because tariff authorization procedures are cumbersome. But DB points out that barge line charges are often misleading —they seldom take account of storage and transshipment costs and the low water supplement.

By reducing tariffs where there is direct competition with a waterway, DB has succeeded in winning considerable quantities of freight—particularly coal, iron and steel, and mineral oil products —from barge lines, and in retaining its own traffic.

● **The direct challenge.** There are occasions when a direct challenge to the canal planners and builders is necessary—when it is clear that a costly construction will provide unnecessary additional facilities for an area already well served by railways.

DB is always prepared to make such a challenge, both in the political field and by more direct methods.

An example of a public challenge came in 1962, when DB issued a statement commenting on a proposed North-South Canal to link the Mittelland Canal with the Elbe. Said DB: "If the canal is built, despite its obvious economic unfeasibility, it will attract only scant traffic, far below the level forecast by the assessor, unless canal transport is subsidised from public funds."

The canal would be, suggested DB, a costly white elephant. Even if traffic were high, it would offer no cost ad-

vantage over railway transport. If traffic were low—as DB experts predicted—the canal might prove an expensive liability.

More direct commercial challenge is the railway's special "As Though" tariff policy, operated on routes where canal projects are planned. Under this policy, the DB sales staff treats potential customers as though the canal already existed, offering them special low rates and other benefits.

The object is to hinder canal construction by drawing away as much potential traffic as possible on contract. Experience has shown that if tariffs are adjusted only when the canal has been built, they do not have the same effect.

By using this method, DB has been successful in defeating proposals for the Saar-Pfalz-Rhine Canal. "As Though" tariffs have been introduced on the basis of agreements between the participating provinces and the Federal Government.

DB has also offered to operate "As Though" tariffs for certain freight and traffic connections along the routes of the North-South Canal and the Main-Danube link.

• **What's needed.** Obviously, what is needed in all countries where rail traffic is threatened by unreasonable waterway competition is a two-pronged attack—one political, one commercial.

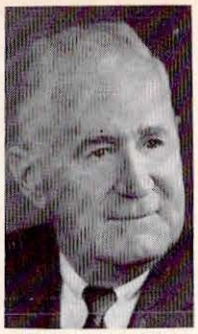
On the political level, railways must embark on a program of public education—exposing the fallacy of "cheap" waterway transport. The huge cost to the community of first constructing and then maintaining the waterway infrastructure must be emphasised.

Most European railways operate at a deficit—largely because railways are the only form of surface transport to find the entire cost of maintaining its infrastructure. One seldom hears of a barge line deficit—because water transport contributes to only a small degree (by way of tolls) to infrastructure costs.

On a commercial level, the vigorous attitude of German Federal Railways could be matched by other systems. In addition to rate adjustments, where these are permitted by law, more should be done to stress and develop the very special advantages of rail transport.

Special cars with sophisticated loading and unloading equipment, and faster service in all weather, are two of those advantages. Even more important, perhaps, is the speedy door-to-door service in unit trains which can be offered to customers with important bulk loads.

Railways can certainly meet the challenge of the waterways—but only if the battle is fought with vigour and tenacity at all levels. ■



WALTER TAFT

WATCHING WASHINGTON

BIG-TRUCK FIGHT LOST—The railroads are faced with prospects for defeat in their undertaking to convince Congress that it should not liberalize size and weight limits for motor vehicles operating on the Interstate Highway System. The liberalizing bill is S.2658, which was passed by the Senate sometime ago. Last week, it was on the House calendar eligible for a vote at any time. It had won required committee clearances—a report recommending its passage from the Public Works Committee and a Rules Committee report assuring its scheduling for a vote.

RECONCILIATION NO PROBLEM—The vote was expected to be favorable. And the measure was also expected to move smoothly on to final Congressional approval. While the proposal before the House was an amended version of the Senate-approved bill, the change was relatively minor. So, the Senate will probably accept it, thus sending the bill to the White House without the delay of sending differing versions to a Senate-House conference committee for reconciliation.

DOT DIDN'T OPPOSE—The President, of course, could kill the bill with a veto, but that's hardly anticipated. Administration spokesmen from the Department of Transportation are not entirely happy, but they did not oppose the bill as cleared by the House committees. They sought some amendments to promote highway safety, and it has been the DOT position generally that such legislation should be tied to legislation implementing the Administration's call for new and increased user charges on publicly-provided transport facilities.

PAVES WAY FOR TRAILER TRAINS—Size and weight limits which S.2658 would change have been in effect since 1956. They are not imposed on the states, but states which allowed more liberal limits would be subject to loss of federal aid for their sections of the 41,000-mile Interstate System. The present gross weight limit is 73,280 lb. This has tended to hold down tractor-trailer lengths, despite the lack of a specific length limit. While continuing this no-length-limit approach, S.2658 would also eliminate the specific gross-weight limit. Axle loads and axle spacing would determine gross weights. Informed sources have estimated that this could clear the way for building up truck-trailer combinations into multi-car highway trains. The bill would also raise the width limit to 102 in., from 96 in.

LUTHER MILLER

AS THE EDITOR SEES IT

"SUPER-RAILROADS" REVISITED—This week's text comes from a book that was published 12 years ago but remains as fresh and compelling as the day it rolled off the presses. We are referring to John W. Barriger's great and unsurpassed treatise which he called, with hope and optimism, "Super-Railroads for a Dynamic Economy." In 1956, as today, railroad earnings were going into a sickening slide. Then, as today, two immediate effects were being felt: reduced maintenance; slashed capital budgets.

THE WORST OF TWO EVILS—Of the two evils, Barriger found the first to be the lesser. "Deferred maintenance. . . at least provides concrete evidence of its presence to serve as a warning," he wrote. "Deferred *development* is not similarly manifest. The most insidious characteristic of retarded progress is the absence of positive proof of its existence."

WHAT THE PUBLIC DOESN'T KNOW—Then Barriger had this to say: "*The most serious aspect of the railway problem is the public's inadequate knowledge of what it has lost and is losing right now by not having the best railway transportation which modern engineering can provide.*" Author Barriger was, of course, addressing himself specifically to the great (and generally unknown) benefits to be derived from "super-railroads" in a New Tokaido Line sense. But his analysis can fairly be extended to all aspects of railroading.

SOME QUESTIONS—What, for example, will be the cost to shippers—and ultimately, to the consuming public—of the fact that railroads this year, with a ridiculously low rate of return, are compelled to spend $600 million less on new freight cars, locomotives and other capital improvements than they did in 1966? (It is useless to say that this spending has merely been deferred. Does anyone really believe that railroads next year will spend $2.6 billion?) In a longer-range context—what is the public paying, in the form of higher transportation costs, in tribute to the highway, airway and waterway lobbies that have so far been able to prevent the establishment of truly multi-modal transportation companies?

ANSWERS, ANYONE—It is often said that railroads are not doing a sufficiently good job of telling the public what they are doing. Maybe one way of getting the message across would be to tell what they could be doing, if—. What you don't know *can* hurt you—and the public should be so advised.

New role for the N&W

(Continued from page 12)

banization of the Kansas City area has taken place, for the most part, south of the city proper. Decentralization north of the Missouri River was held back for a number of reasons, including a lack of convenient river crossings. But since World War II, three new bridges have been built, a fourth span has been converted from rail to highway use and a fifth bridge is being built in connection with Interstate highway construction.

The N&W project, the Star editorialized, will capitalize on all these recent bridge and highway improvements—and "all signs now point to a major new avenue of expansion to the north."

• **How N&W gains.** N&W President Herman H. Pevler outlines the railroad philosophy in specific terms:

"Our basic business has been and will continue to be transportation—and although we are very much interested in diversification of this type, we will continue our program of acquiring property for industrial development purposes . . ."

"Some of the land we own is neither needed nor particularly suitable for heavy industry. It is highly desirable, however, for residential and light commercial purposes, because much of it has the advantage of being close to major centers of commerce and rapidly-growing areas. Putting the land to use in this manner gives N&W additional growth opportunities and provides a source of income not dependent upon rail operations."

In the present growth era, Pevler emphasizes, N&W "is exploring every opportunity for growth."

In its real-estate ventures, the railroad is playing things cool-and-careful. The investment banking house of Eastman Dillon Union Securities & Co. of New York is lending an advisory hand. And N&W is choosing its development partners on a basis of experience and proven capability. Boehm, for example, has developed and sold shopping centers and apartment complexes in Illinois and Iowa, as well as in Missouri.

Particularly with mergers and merger-related consolidation of facilities, railroads are going to find themselves with considerable acreage no longer needed for rail purposes but, perhaps, not exactly made-to-order for ID use either. It's a safe bet that a good number of roads will be putting their real estate, financial and engineering people to work in the same way N&W has. ■

PC gets more work from its switchers

Utilization of switching locomotives and their crews has been improved by an electronic device turned out by the road's Cleveland research department.

Time studies and reviews of past performances failed to do the trick, so Penn Central decided to give electronics a go at improving utilization of switching locomotives and their crews at the road's Detroit yards.

The assignment for development of a fool-proof device for monitoring locomotive movements was turned over to the Applied Research section of the PC's Research Department in Cleveland What the researchers there have come up with is an electronic device called a Locomotive Power Interrogator. The device is capable of indicating visually, as well as recording, the activities of a number of locomotives in a switch yard.

● **The system works.** Currently, four locomotives at the Detroit yards are equipped for monitoring by the interrogator. Supervisory personnel are finding that they are able to make more accurate determinations of the proper use of equipment and crews.

The new system is divided into two basic parts—an interrogator and a transponder. The interrogator is located at the base radio station in the yards. It is connected to the station's transmitter-receiver. The transponders, each contained in a 6-cubic-inch tamper-proof box, are mounted in the four locomotives and connected to their transmitter-receivers.

● **Key to the operation.** Through the existing radio links between the base station and the locomotives in the field, the prototype interrogator system can both identify the locomotive being monitored and determine its instantaneous status. Resonant reed relays, which permit this selective interrogation, are the key to the operation of the system.

The relays consist of encoders, or audio tone generators, and decoders which, when activated, can perform a control function. Different tones, representing different functions being performed by the locomotives, are transmitted back to the base station. The tones selected by the PC are in the 300 Hz. to 450 Hz. range.

Each locomotive has its own encoder-produced tone for selection. Two tones common to all the units are used to transmit back the status information. Simple two-wire cables are used to connect to the points in the locomotive from which the required status information is secured. The PC is using previously unused contacts on relays which are activated in the locomotives under load or no-load conditions.

● **The logic pattern.** In addition to a decoder matched to the interrogating encoder at the base station, the transponders in each of the locomotives have two encoder modules with associated relays wired into a logic pattern to produce a desired delay between receiving and transmitting signals. Each transponder also has a relay circuit which keys the transmitter for returning the locomotive's status information to the interrogator.

The base station's interrogator consists of these basic units:

—A self-resetting master clock that can be set for the frequency of interrogation.

—Encoders for selective interrogation.

—Decoders, associated with the readout system.

—A decade counter system for proper sequencing of the interrogation.

—Switching and keying circuits to control the base's radio equipment.

—A display device in the form of colored lamps to indicate the status of interrogation. (A blue lamp indicates an interrogation is being made. A green one shows that the locomotive is under power. Red means the locomotive is not under power, and yellow indicates failure to receive an answer.)

—A time lapse clock for each locomotive to indicate total time under power.

—A strip chart recorder to record the time the locomotive is under power.

PROTOTYPE Locomotive Power Interrogator automatically monitors switching yard activities, provides readouts and strip chart records of locomotive status.

Programmed information, initiated by the setting of the master clock, can be supplemented by manual interrogation. This is done by pressing a button grouped with the readout lamps on the interrogator panel.

● **Solid-state circuitry.** In developing the device, PC researchers, under the direction of C. E. Digby, research engineer, and L. R. Lombardo, assistant manager of applied research, used solid state circuitry, including integrated circuits, to provide proper sequencing and switching of inputs and outputs.

J. J. Wright, PC's vice president-research, reports that savings resulting from installation of the power interrogator system have not been computed yet because of the newness of the operation. The interrogation panel for the prototype system can handle one additional locomotive, while the electronics package itself has capacity for a total of 10 units, Wright added. ■

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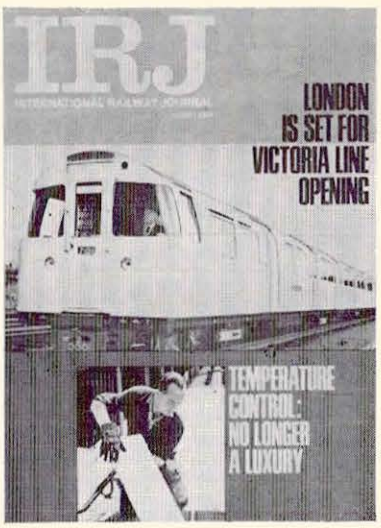

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PEOPLE IN THE NEWS

ALTON & SOUTHERN.—**L. B. Griffin** appointed superintendent, East St. Louis, Ill.

ASSOCIATION OF AMERICAN RAILROADS.—**C. L. Davidson,** assistant executive vice chairman, Mechanical Division, named secretary, Mechanical Division, Chicago, succeeding **Frank H. Stremmel,** retired after 46 years with the AAR.

Hal H. Hale, assistant to vice president, operations and maintenance, retired after more than 44 years of service.

BURLINGTON — **Baron Laubenfels,** assistant chief engineer, retired July 1 after 39 years of service.

Charles T. Tucker, office manager, San Francisco, named sales representative, Spokane.

BESSEMER & LAKE ERIE—DULUTH, MISSABE & IRON RANGE—ELGIN, JOLIET & EASTERN—LAKE TERMINAL—UNION.—Francis S. Hoist appointed engineer—operations research, Pittsburgh, Pa.

CANADIAN NATIONAL.—Has set up a container development branch which will be the responsibility of **E. J. Cooke,** system vice president, special duties, Montreal (RA, Feb. 12, p. 31). **Rupert J. Tingley,** customer research manager, Atlantic Region, named general manager of the new branch. Purpose of the move is the development of a Canada-wide container system for CN. "Our immediate interests involve the role CN might play in a transcontinental 'land bridge' service and the movement of containers from Far East and European locations to points in inland Canada and return," Mr. Cooke said. "We are also concerned with traffic which might originate or terminate in the U.S. but enter or leave the continent through a Canadian port."

CHESAPEAKE & OHIO—BALTIMORE & OHIO.—Charles C. Rettberg, Jr., assistant general attorney, B&O, Baltimore, named general attorney, C&O-B&O, Cleveland.

CHICAGO & NORTH WESTERN. — **R. A. Naujokas** appointed general auditor; **B. M. Dermer,** assistant to comptroller; **D. M. Krueger,** managing auditor; **T. J. Jur,** manager of special studies; **R. T. Swanson,** general accountant; **R. J. Enders,** assistant auditor capital expenditures; **J. M. Steele,** staff assistant-contract audit work; **R. E. Hopps,** assistant auditor passenger accounts.

W. G. Kranz, general superintendent-transportation, Chicago, advanced to assistant general manager there, succeeding **E. H. Brobst,** retired. **M. R. Long,** terminal manager, Proviso, Ill., succeeds Mr. Kranz, and in turn is replaced by **R. A. Sharp. H. A. Peterson** named superintendent, Missouri division, Oelwein, Iowa. **E. J. Wallick** appointed trainmaster, Twin Cities division, Minneapolis, to replace **D. T. Warning,** assigned other duties.

E. B. Wilson, assistant general manager-administrative services, resigned to become executive vice president, **Illinois Terminal.**

DETROIT, TOLEDO & IRONTON.—Robert C. Courtney, secretary and treasurer, Dearborn, Mich., elected vice president, and has been succeeded by **Norman A. Wallen. Calvin E. Donahue,** assistant comptroller, promoted to comptroller. **Michael H. Weisman,** assistant to comptroller, named assistant comptroller. **John E. Berman** appointed assistant secretary—assistant treasurer.

FRISCO.—D. E. Egertson, traffic manager (chemicals), St. Louis, named traffic manager (pulp, paper and lumber). **J. M. Crites,** traffic manager (agricultural chemicals), St. Louis, replaces Mr. Egertson.

R. J. Rodefeld, director market research, appointed assistant general manager rates. **R. E. Cook,** traffic manager-special assignments, replaces Mr. Rodefeld.

GULF, MOBILE & OHIO.—William G. Maitland promoted to district freight traffic manager, Detroit, Mich., succeeding **Lowell L. Deck,** who retired June 30, after more than 45 years of service. **Allen P. Waldon** promoted to district freight agent, Akron, Ohio.

ILLINOIS CENTRAL.—Herbert T. Landow appointed assistant vice president-planning, information and control systems. He was formerly a consultant for **Peat, Marwick, Mitchell & Co.**

ILLINOIS TERMINAL.—E. B. Wilson, former assistant general manager—administrative services, **Chicago & North Western,** elected executive vice president of the IT on July 1. **E. L. McKenzie,** assistant freight traffic manager, St. Louis, Mo., promoted to freight traffic manager, succeeding **W. L. Myers,** resigned. **Charles A. Cameron** appointed assistant freight traffic manager, St. Louis, succeeding **Kenneth W. Ross,** resigned.

LEHIGH VALLEY.—Daniel W. Smith, advisory information analyst, **Penn Central,** Philadelphia, appointed comptroller, LV, Bethlehem, Pa., succeeding **James W. McDonnell,** who is returning to the PC at Philadelphia.

MAINE CENTRAL.—E. Spencer Miller, president and chief executive officer, elected president, chief executive officer and chairman of the board, Portland, Me., succeeding the late **Edward S. French. Kenneth M. Burr** named to the executive committee. **John F. Gerity,** assistant comptroller, MeC, elected clerk of the MeC and **Portland Terminal.**

NORTHERN PACIFIC.—Kenneth T. Woodruff, manager disbursement accounting, and **Robert D. Parshall,** manager of tax accounting, appointed assistant comptrollers. Mr. Woodruff is succeeded by **Wilbur D. Smith,** manager-production control and scheduling. **T. H. Denesen** replaces Mr. Parshall. **M. B. Griemann** named assistant to comptroller. **R. E. Wesley** succeeds Mr. Griemann as general accountant.

In a realignment of the market development department, duties of **W. H. Egan,** marketing manager-TOFC and COFC, will be expanded to include systemwide sales management responsibility for foreign freight and trailer and container-on-flatcar traffic. **D. B. Bostrum,** marketing manager-special assignments, St. Paul, named to the new position of foreign freight manager, Seattle. Mr. Bostrum will have charge of import-export traffic for West Coast ports and will also be Alaskan representative for the NP. The foreign freight agents at Chicago and New York, and the managers of TOFC and merchandise sales at St. Paul and Seattle, and their staffs, will be part of the marketing organization under Mr. Egan's supervision.

Edward B. Stanton, vice president-executive department, retired June 30 after more than 41 years' service.

C. L. Harding, assistant vice president-operations, retired June 30 after 44 years of service.

N. M. Doerr, assistant purchasing agent, named general storekeeper, to succeed **E. L. Jensen,** who retired June 30 after 46 years' service.

David T. Nicoll appointed manager, passenger and station accounting, replacing **Hilmer C. Hoving,** who retired after 46 years of service.

PENN CENTRAL.—Additional appointments recently announced:

Robert A. Herman, Jr., superintendent of passenger transportation, PRR, system, Philadelphia, named superintendent, Philadelphia Division, PC, succeeding **Kenneth E. Smith,** promoted to assistant general manager, Southern Region, Indianapolis. **Ronald L. Short,** trainmaster, Conway Yard, Pa., appointed assistant superintendent there, succeeding **P. Edgar Ford,** named assistant superintendent, Fort Wayne Division, Fort Wayne, Ind. **G. F. Bressler,** trainmaster, Enola, Pa., succeeds Mr. Short. **David A. Fink,** trainmaster, Morrisville, Pa., promoted to assistant superintendent—freight, New York Division, New York. **Frank Talbot** succeeds Mr. Fink. *(Continued on page 28)*

William J. Taylor
REA

Lawrence Cena
Santa Fe

Charles S. Hill, manager of general accounting, PRR, appointed assistant vice president—accounting, PC, Philadelphia. **J. J. McTernan** continues as assistant vice president—budgets and controls. Other appointments: **N. J. Hull,** director—general accounting; **R. S. Bergey,** director—revenue accounting; **C. A. Stiteler,** director—personnel accounting and employee benefits; **T. F. Shaekel,** director—car accounting; **G. Jacks,** director—regional accounting installation and **C. Comly,** director—accounting policy.

Appointments at Philadelphia, effective June 1: **E. A. Kaier,** senior general solicitor; **A. Schroeder,** general attorney; **C. Helmetag, Jr.,** and **R. J. Murphy,** general attorneys-commerce; **E. K. Taylor** and **D. L. Wilson,** general attorneys-corporate and finance; **R. N. Clattenburg,** general attorney—labor relations. **J. T. Lynch** named general claims attorney, New York.

J. B. Hitchcock appointed division superintendent, River Division, Weehawken, N.J.

Harry H. Ramsay, assistant vice president—freight sales, Central Region, Pittsburgh, announced the following appointments in his department: **James A. Brown** (sales manager, Pittsburgh District, PRR), and **Anthony A. Cicenas** (freight sales manager, NYC, Buffalo), named freight sales managers; **Sherman C. Gibson,** assistant freight sales manager, Pittsburgh (Pittsburgh sales manager, PRR); **Spencer A. Rowan** (division freight sales manager, NYC, Columbus, Ohio) and **Robert M. Tillotson** (district sales manager, PRR, Pittsburgh), named division sales managers, Pittsburgh. **Harry E. Williamson** promoted to district sales manager, Pittsburgh (assistant district sales manager, PRR, there); **Vernon B. Henderson,** division sales manager, Youngstown, Ohio (district sales manager there).

Other appointments to Mr. Ramsey's immediate staff: **Steven M. Suchanec,** administrative assistant (office manager for Mr. Ramsay); **Samuel R. Schroder,** manager—freight service and special equipment (supervisor—special equipment bureau, PRR, Pittsburgh); **E. Gordon Tuenge,** supervisor—freight service (administrative assistant to assistant vice president—freight sales, NYC, Cleveland); **Richard P. Burke,** manager Truc-Train sales (same title, PRR, Pittsburgh); **Carrol A. Dowling,** supervisor—special equipment (supervisor—freight service, PRR, Pittsburgh).

District sales managers assigned the same locations on PC which they held on the PRR: **Ivan L. Ivy,** Wheeling, W. Va.; **Gerald L. Wendorf,** Altoona; **William S. Boyd,** Williamsport, Pa.; and **William E. Burroughs,** Elmira, N.Y. **C. Robert Williamson** remains assistant district sales manager, Steubenville, Ohio.

READING.—John J. Foster promoted to chief signal, electrical and communications engineer, Philadelphia, succeeding **George B. Blatt,** named assistant chief engineer—staff consultant, signal, electrical and communications. **Lewis D. Freeman,** engineer of maintenance of way, promoted to assistant chief engineer—maintenance. **Edward C. Lawson,** engineer, planning and construction, promoted to assistant chief engineer—construction. Mr. Lawson is succeeded by **William P. Houwen,** construction engineer. **Robert J. Fisher,** engineer of structures, named assistant to chief engineer. **John W. DeMoyer,** assistant chief engineer, named assistant chief engineer—staff consultant, budget and control.

REA EXPRESS.—Ray H. Jordan elected president and chief executive officer, New York (RA, July 1/8, p. 7). **William J. Taylor,** former president, elected chairman. Mr. Jordan retired as president of J. C. Penney Co. on April 1.

SANTA FE.—Lawrence Cena, assistant to the vice president-operations, Chicago, appointed assistant vice president-operations there.

OBITUARY

Larry H. Dugan, 56, vice president and western counsel, **Milwaukee,** died July 9 at Seattle.

Jack S. Frost, 57, assistant vice president for industrial development, **Illinois Central,** died July 7 in Illinois Central Hospital, Chicago.

R. W. Rogers, retired general purchasing agent, **Seaboard Air Line,** died June 28 at his home in Nashville, Tenn.

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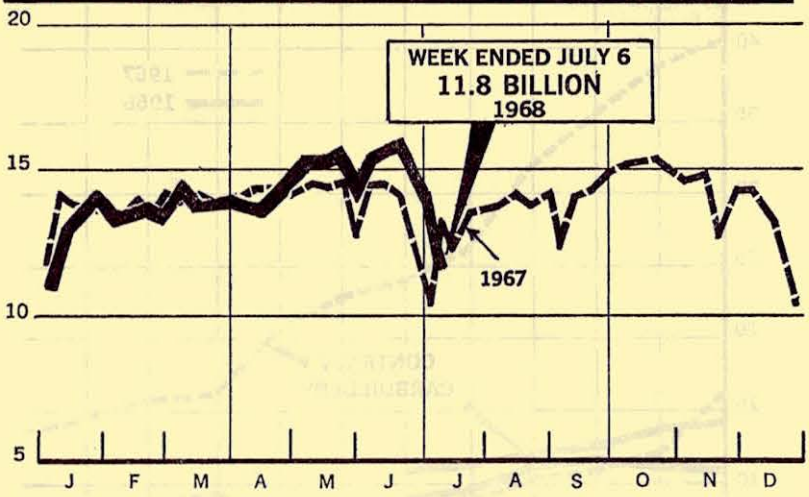
July 12, 1968

Circle 10 on coupon page 36

RAIL FREIGHT TRAFFIC TRENDS

BILLION TON-MILES (Estimated)



Source: Association of American Railroads

SHIPMENTS OF RAILROAD STEEL PRODUCTS

(MAY AND FIRST FIVE MONTHS 1968)

	NET TONS			
	May	Per Cent Change*	Five Months	Per Cent Change*
Rails, trackwork and equipment	101,494	+ 0.7	479,658	— 6.4
Freight and passenger cars and locomotives	199,077	— 1.9	962,170	—11.5
Street railways and rapid transit systems	9,260	+97.3	29,996	+62.3

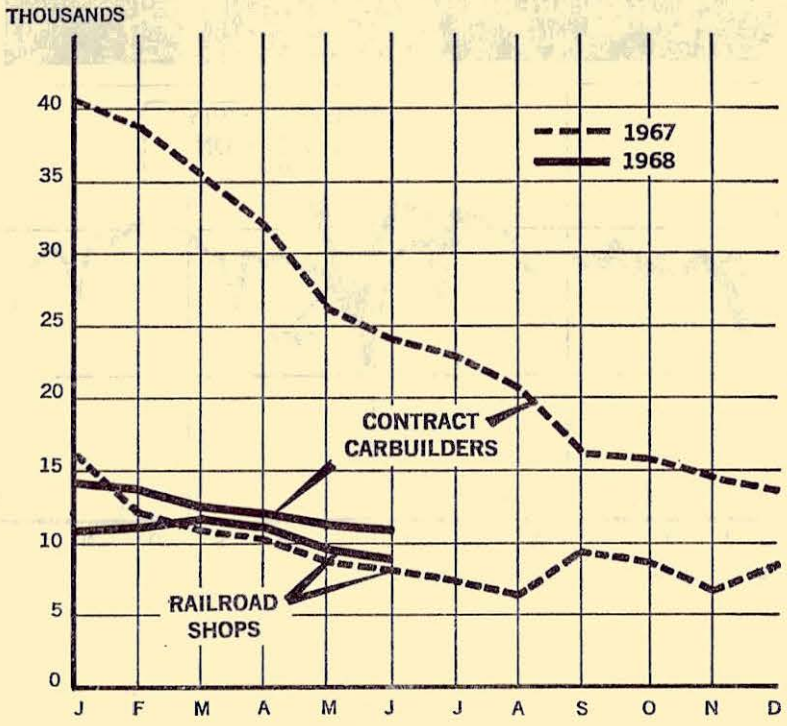
*Per cent change compares 1968 periods with like 1967 periods.
Source: American Iron and Steel Institute.

Current statistics

Carloadings, revenue freight	
28 wks., 1968	14,983,301
28 wks., 1967	14,938,263
New freight cars on order	
June 1, 1968	19,281
June 1, 1967	32,485
New freight cars delivered	
5 mos., 1968	26,947
5 mos., 1967	39,129
Serviceable cars	
June 1, 1968	1,396,119
June 1, 1967	1,419,210

BACKLOG OF DOMESTIC FREIGHT CAR ORDERS

(On first day of each month)



Source: American Railway Car Institute.

SELECTED FINANCIAL STATISTICS*

(Class I line-haul railroads)

	First Quarter 1968	First Quarter 1967
FREIGHT REVENUE	$2,348.7	$2,229.3
PASSENGER REVENUE	104.6	117.2
ALL OTHER REVENUE	156.7	192.7
TOTAL OPERATING REVENUES	2,610.0	2,539.2
OPERATING EXPENSE	2,079.4	2,029.0
TAXES	231.4	233.8
EQUIPMENT AND JOINT FACILITY RENTS	151.3	131.1
TOTAL OPERATING EXPENSES	2,462.1	2,393.9
NET RAILWAY OPERATING INCOME	147.9	145.3

*In millions of dollars.
Source: Bureau of Economics, ICC.

FREIGHT-CAR MILEAGE AND MILES PER HOTBOX SETOFF

	January 1968	January 1967	January 1966
Total Mileage	2,644,360,338	2,764,521,374	2,733,525,804
Miles per Hotbox Setoff	1,415,611	1,825,972	1,464,912

Source: Latest available figures from Operations and Maintenance Dept., Mechanical Division, AAR.

MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended July 13 totaled 549,532 cars, the Association of American Railroads announced on July 18. This was an increase of 106,155 cars, or 23.9%, compared with the previous week; an increase of 19,422 cars, or 3.7%, compared with the corresponding week last year; and a decrease of 16,128 cars, or 2.9%, compared with the equivalent 1966 week. Ton-miles generated by carloadings in the week ended July 13 are estimated at 14.4 billion, an increase of 8.1% above the corresponding week of 1967, and 3.6% above the 1966 week.

REVENUE FREIGHT CARLOADINGS

For the week ended Saturday, July 13			
District	1968	1967	1966
Eastern including Allegheny and Pocahontas ..	212,228	207,855	211,283
Southern	111,535	103,668	108,613
Total Eastern and Southern Districts	323,823	311,523	319,896
Northwestern .	77,196	78,528	91,575
Central Western	110,119	103,188	115,558
Southwestern .	38,394	36,871	38,631
Total Western Districts	225,709	218,587	245,764
Total All Roads	549,532	530,110	565,660
Commodities:			
Grain and Grain Products	45,242	51,742	59,737
Livestock	911	1,078	1,261
Coal	96,658	102,845	95,155
Coke	8,313	6,300	8,275
Forest Products	39,683	38,140	38,756
Ore	53,257	52,546	60,517
Merchandise l.c.l.	3,501	4,612	6,195
Miscellaneous .	301,967	272,847	295,764
July 13	549,532	530,110	565,660
July 6	443,377	405,594	445,102
June 29	539,144	505,672	554,203
June 22	598,149	565,429	616,448
June 15	590,880	570,783	625,313
Cumulative total, 28 weeks ...	14,983,301	14,938,263	15,628,893
Estimated revenue ton-miles (billions) 28 weeks....	402.2	384.9	392.9

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the week ended July 6 totaled 22,228 cars, carrying 36,593 trailers, compared with 18,962 cars, carrying 30,944 trailers, in the corresponding 1967 week. Loadings for 1968 up to July 6 totaled 675,919 cars, carrying 1,095,471 trailers, compared with 605,075 cars, carrying 995,563 trailers, in the corresponding period of 1967.

IN CANADA

Carloadings for the seven-day period ended June 21 totaled 78,083 cars, compared with 78,161 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd. from Connections
Totals for Canada		
June 21, 1968.....	78,083	26,194
June 21, 1967.....	79,661	24,512
Cumulative Totals		
June 21, 1968.....	1,747,324	602,156
June 21, 1967.....	1,780,900	616,416

FREIGHT TRAIN CARS

• *Seaboard Coast Line.*—Ordered 100 90-ton, 60-ft-9-in.-long box cars from Pullman-Standard at a cost exceeding $2,250,000. Delivery of the cars will begin next October. They will be assigned principally to hauling paper products and will have special cushioning devices.

CAR OWNERSHIP

• *Serviceable cars decline.* Revenue freight cars in serviceable condition owned by Class I railroads on June 1 totaled 1,396,119, compared with 1,419,210 on June 1, 1967, according to most recent AAR Car Service Division report. Estimated total ownership of all railroad- and privately-owned freight cars on June 1 (see table below), was 1,812,710 (average capacity: 63.55 tons), compared with 1,829,407 (average capacity: 61.87 tons), on June 1, 1967.

ESTIMATED OWNERSHIP—ALL REVENUE FREIGHT CARS

(June 1, 1968 vs. June 1, 1967)

		Box	Covered Hopper	Gondola	Hopper	Flat	Refrig.	All Others	Total
Class I	1968	559,566	121,561	199,979	415,550	67,649	51,618	52,297	1,473,220
	1967	577,028	112,001	205,207	426,070	66,330	49,963	59,819	1,496,418
RRO&C Refrig.*	1968	0	0	0	0	0	49,662	0	49,662
	1967	0	0	0	0	0	52,812	0	52,812
Private	1968	1,350	28,473	331	3,919	42,051	15,146	172,290	263,560
	1967	1,857	26,194	599	1,745	36,460	15,853	171,104	253,812
Class II & S&T†	1968	9,339	892	5,190	8,388	637	727	1,095	26,268
	1967	9,122	813	5,503	8,521	702	558	1,146	26,365
GRAND TOTAL	1968	570,255	150,926	205,500	427,857	110,337	117,153	230,682	1,812,710
	1967	588,007	139,008	211,309	436,336	103,492	119,186	232,069	1,829,407

*Railroad owned and controlled refrigerator car lines.
†Class II railroads and switching and terminal companies.

NEW FACILITIES

• *Seaboard Coast Line.*—Announced two bridge-rebuilding projects in South Carolina. The bridge over the Savannah River just north of Hardeeville on the SCL Savannah-Charleston line will be rebuilt, at a cost of $1.5 million, by the B. F. Diamond Construction Co. The project, covering 1,100 feet, involves removing three through truss spans and rearranging 11 existing deck spans. A new concrete substructure will support the entire bridge. A rolling lift span will provide a 90-foot-wide waterway clearance between the bridge fenders. Completion is scheduled for May 1, 1969. The bridge over the Santee River at Remini, on the Florence-Augusta line, will be rebuilt at a cost of $900,000 by James T. Triplett, Inc. Existing through truss spans for a distance of about 600 feet will be replaced with deck spans located below the track. A through girder span over the navigable channel will provide added clearance above water level. Open-deck timber trestles on both approaches to the steel structure are being converted to ballast deck with cross ties resting directly on a bed of crushed stone. Completion is scheduled for July 31, 1969.

YOU OUGHT TO KNOW

Trailmobile reorganizes field sales setup

Trailmobile has realigned its field sales organization under four regional groupings: Western, Central, Northeastern and Southeastern. Carl T. Crumrine, vice president-marketing, says the move from a five-region to a four-region setup will give regional managers "greater responsibility for the operation of divisional branches and local dealerships to give the sales force greater flexibility in dealing with customer service at the local level." Trailmobile's rail, container and government sales will continue to be handled from Chicago division headquarters.

Students get a view of what railroading is like

Several hundred students from Chicago inner-city and suburban high schools are getting a close-up look at railroading this summer via Project Wingspread, a joint venture of city and suburban boards of education with participation by six railroads, the AAR and Electro-Motive. In a series of two-day sessions, the students will see an electronic classification yard, a TOFC/COFC terminal and a major commuter-service operation, plus the AAR research laboratory and the EMD plant. Participating railroads are Santa Fe, Chicago & North Western, Burlington, Milwaukee, Illinois Central and Rock Island.

Rail deficit rises in Britain; rate lag blamed

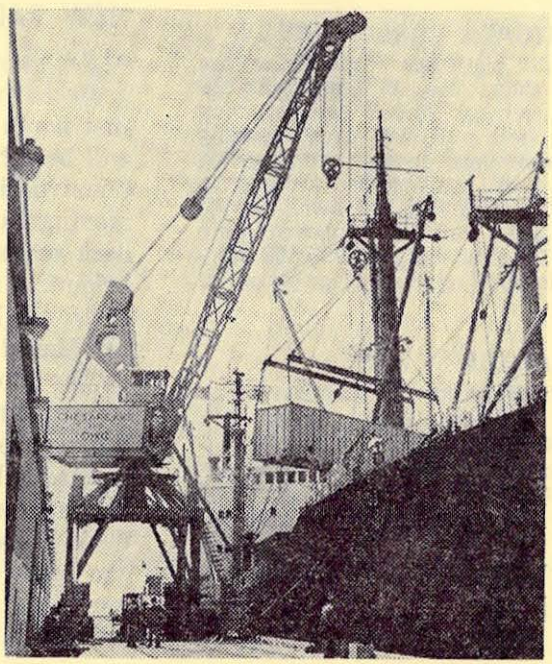
British Railways operated at a net loss of $368 million in 1967, compared with a loss of $323 million in 1966, according to BR's just-released annual report. In accounting for the increased deficit, the report cited "the perennial problem of fares and charges always lagging behind increases in wages and other costs." On the plus side, BR reported extension of its Freightliner (Container) services.

Group is planning outdoor railroad show at Chicago

While over 100 railroad suppliers are exhibiting their products and services indoors at Chicago's Sherman House during this Fall's Coordinated Associations' annual meetings, another six—possibly over a dozen—will be showing their wares outdoors at Illinois Central's South Water St. yards in downtown Chicago. The six, who are definitely planning to exhibit outside, have formed Railway Transportation Associates for the purpose of coordinating activities at the exhibit site. They include Dowloc, International Car, General American, MacLean-Fogg, North American Car and Rockwell Manufacturing. A. Schiffers, Jr., executive secretary of the Railway Supply Association, which is sponsoring the indoor exhibits, said the RTA group will have 4,800 feet of exhibit track. Bus transportation will be provided between meeting headquarters at the Sherman House and the outdoor site.

Giant crane installed by C&O at Virginia pier

Chesapeake & Ohio wants to be able to handle its share of the predicted container traffic boom, so it has installed a husky 100-foot-high cargo crane at its Pier B at Newport News, Va. The crane, shown hoisting a 40-foot container aboard a German ship, has 16 tires to move it around the pier. The $290,000 crane can lift 50 tons of cargo at a 30-foot radius, and move standard containers at a 50-foot radius. It is controlled by one operator.



John W. Bergen
Stanray

T. B. Monson
PC&F

Burton C. Jameson
PC&F

Dan Porter
Thermo King

SUPPLY TRADE

John W. Bergen has been named to the newly established position of president, **Railway Equipment Division, Stanray Corp.** Mr. Bergen was formerly vice president, **Evans Products Co.**, and president of its **United States Railway Equipment Co.** subsidiary.

T. B. Monson, vice president and general manager, **Renton Division, Pacific Car & Foundry Co.,** has been elected senior vice president. **Burton C. Jameson, Renton Division** assistant general manager, has been elected a vice president and will succeed Mr. Monson as the division's general manager.

Dan Porter, sales manager, eastern division, **Thermo King Corp.,** has been named manager, container division, Minneapolis. **Dale Johnson,** sales manager, southeastern division, succeeds Mr. Porter. **Dale Palm** is sales manager, western division.

Charles L. Bergmann and **Miss Isabel H. Benham** have joined **Shearson, Hammill & Co. Inc.,** New York, as first vice presidents and voting stockholders in the Corporate Finance Department. The railroad specialists were formerly associated with R. W. Pressprich & Co., where Mr. Bergmann headed the Corporate Underwriting and Corporate Trading Departments and Miss Benham headed the Transportation Research Department. Continuing as a team, Mr. Bergmann and Miss Benham will be responsible for Shearson's expanded advisory services to transportation firms, as well as for acquisitions and financing, and for providing research services for institutional investors.

F. William Gutzwiller has been named manager of transportation equipment engineering, Transportation Systems Division, **General Electric Co.,** Erie, Pa. He was manager of application engineering, Semiconductor Products Department, Auburn, N. Y.

C. L. Bergmann
Shearson, Hammill

Isabel H. Benham
Shearson, Hammill

Arthur de St. Aubin has been named sales manager for railroad and airline markets, **Reflective Products Division, 3M Co.** He was previously sales supervisor, railroad and airline markets for the division.

Alfred C. Smith, manager of personnel relations, **AMSTED Industries,** has been named director of personnel relations.

William L. Mathews, tank car western region sales manager, **General American Transportation Corp.,** has been named sales manager of maintenance services.

Andrew A. Arentz, Jr., has been appointed manager, Research Division, Chicago. He was formerly administrative assistant to vice president for corporate planning.

Daniel W. Conrad, assistant, GATX executive department, has been elected to a newly created vice presidency.

Charles R. Cross has been appointed to the newly created position of manager of market research, Research Division.

Marcus H. Schmidt, Southern manager, Tank Car Division, has been transferred from New Orleans to Atlanta, to take charge of the new office there.

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These charts are very helpful to AAR billing clerks, mechanical engineers, purchasing and stores personnel, car inspectors, write-up men, car foremen, and anyone else who needs a knowledge of car parts and their relation to each other.

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- ☐ Tank Car (22x35 inches)
- ☐ Refrigerator Car, wood sheathed, steel underframe, 1920 design (14x20 inches)

7/22/68

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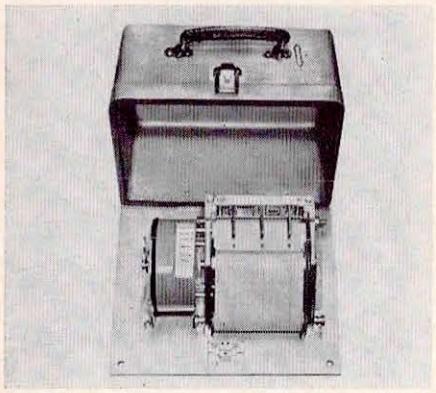
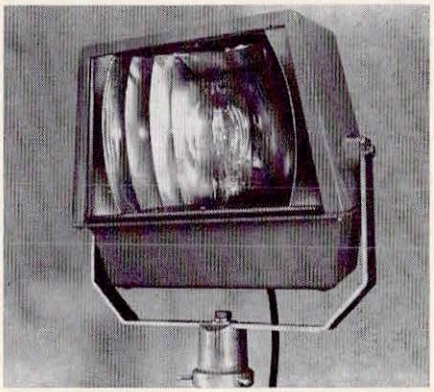
NEW PRODUCTS REPORT



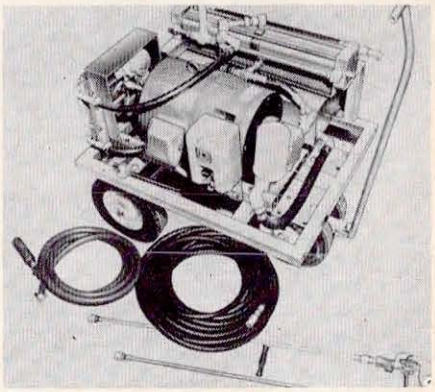
Shock recorder (RA-1)

Recording styli in improved 21-day clock unit which approximates when and where impacts occur, whether intra-plant, during outside shipment, or after delivery, have been moved from cover to a bracket on chart drive frame. Three styli, independent of each other, record both magnitude and direction of a resultant shock vector—longitudinal, lateral or vertical. The unit can be attached directly to product inside shipping container. *Impact-O-Graph Corp.*



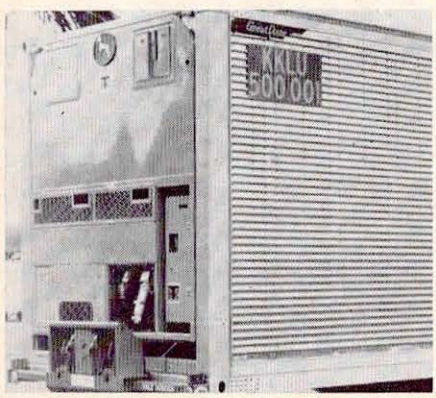
Floodlight fixtures (RA-2)

Batwing outdoor floodlight fixture series includes two models for use with 400- and 1,000-watt mercury or metal-arc lamps. Both produce "batwing" type light distribution. Alzak aluminum reflectors produce beam patterns with maximum candle-power lobes at 45 deg to left and right of beam center. Lights are internally wired. Trunnion brackets are compatible with five standard cross-arm or pole mountings. Unit swings through its bracket for 360-deg vertical adjustment. *Sylvania Electric.*



High-pressure cleaner (RA-3)

A heavy-duty gun with a locking trigger, 50 ft of high-pressure hose, and three nozzles with quick-disconnect couplers feature the Modern Model 850 cleaner that delivers 1000 psi at 240 gph. The 32-in.-long, 25-in.-wide, 17-in.-high unit may be used as a portable unit, or as a power plant for a centralized cleaning system. It will handle water, soap and all dilute acid and chemical solutions normally recommended for use in high-pressure cleaners. *Slifer Mfg.*



Refrigeration unit (RA-4)

The EL-75 all-electric nosemount refrigeration and heating unit fits flush in the recessed wall of a container frame. It is 12 5/8 in. deep, 84 in. high, and 82½ in. wide. Cooling is provided by a semi-hermetic, 7½-hp compressor operating at 1,750 rpm.; heating, by electric resistance heater strips. The system is 24-volt a-c, and there are controls both for automatic and manual defrost. The unit is powered by an accompanying generator set for over-the-road operation. *Thermo King Corp.*

Rust-resistant paint (RA-5)

Barium metaborate (Bar/Met) is the rust-inhibiting pigment used in latex-based Acri-Gard, a direct-to-metal freight-car paint which is said to meet many state standards for air-pollution control. It is also said to have an exceptionally low chalking rate, to be resistant to mold and fungi, and to be non-toxic. Because it is water reduced, paint odors are eliminated and fire hazard reduced. Two coats can be applied in 30 min. *Valspar Corp.*

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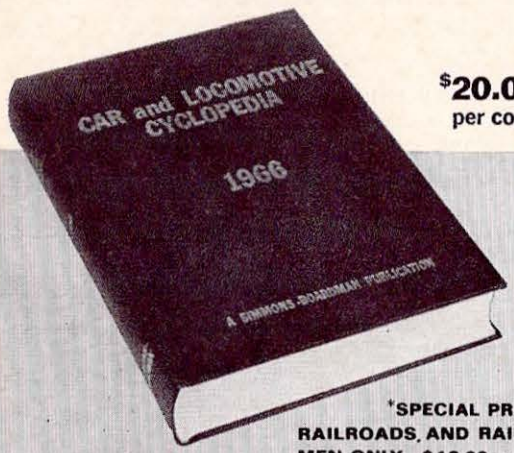

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VIEWPOINT

Railroads must be bold, innovative and gambling

Anybody who listens to a great number of pro-railroad speeches can almost recite the text along with the speaker: It's all-hail the unit train and piggyback and the diesel revolution and auto-rack cars—and then an outlining of problems, multiple ones, facing the industry—and then an up-beat ending.

Anybody who listens to a great number of railroad-critic speeches can do the same: Railroads are unprogressive and disunited, and they are the victims of insular and incestuous thinking—and then there is the warning that "you boys had better get with it, or America will leave you behind."

Neither the pro- nor the anti- speeches really are always on-target. Maybe it's about time people started talking about what railroads are doing to make transportation better for the user—not so much in terms of successes (which often have hurt somebody else) or failures (which just hurt) but more in terms of *efforts*, win or lose or draw.

Take grain—or, to be specific, export grain. Grain is a commodity that does not stir much excitement. It should, because if it does not move, nobody eats. Producers are concerned, however, because they have to have a market. Consumers, world-wide, are concerned, because people do have to eat. Government is concerned for a variety of reasons. Transportation agencies are concerned, because for some of them grain is the profit-or-loss difference.

Take grain—and see what's happening. A couple of years ago, railroads started moving grain for export in unit trains to the East Coast when the Great Lakes and the St. Lawrence Seaway were iced-up. That was new. This year, Illinois Central is fighting for Rent-A-Train. That's new. Rock Island has set special export grain rates. That's new. Chicago & North Western and several barge lines have worked out joint rates for export grain. That's new. Roads such as Great Northern and Milwaukee are experimenting with train-load grain movements from Montana to West Coast ports. That's new.

IT'S TIME TO ACCENTUATE THE POSITIVE

Maybe it's time somebody started talking more about the many ways in which railroads are *trying* to develop new ways of serving—and how they are *trying* to learn from each other, for the benefit of both carrier and shipper.

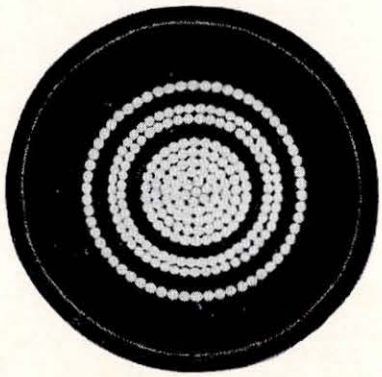
IC, RI and C&NW are all competing, with differing proposals, in the Gulf Coast export-grain market. Competition is tough. It means a lot to each individual railroad. In the long run, it may mean a lot more for transportation. An officer of one of the three roads puts it this way: "We're all trying to do something, and we're going different routes. Maybe they're right, maybe we are. This way, we're going to find out what we can do and what we can't."

This is the kind of railroad industry that ought to be talked about. This is the kind of railroad industry that's going to win, eventually—the bold, innovative, experimenting, gambling, take-a-chance industry, the industry that *tries*. What the industry *has* done makes great reading. But confidence in railroads depends not on the past but rather on what is going on now. And that is quite a story.

on guard

This is a hex sign, signifying long life, one of many which Pennsylvania Dutch farmers put on their barns to protect them against the elements—storms, drought, crop failure. You'll still see hex signs in Amish country, but these prosperous farmers do not rely on superstition for long life and success. They work too.

Below is a cross-section of a cable. It looks like many other cables, but the big difference is the permanent protection furnished by the insulation. That's where Kerite comes in. No other cable has been proved by time in the way the Kerite has. It works for you. Put a hex on trouble with Kerite. The Kerite Company, 30 Church Street, New York, N. Y. 10007.



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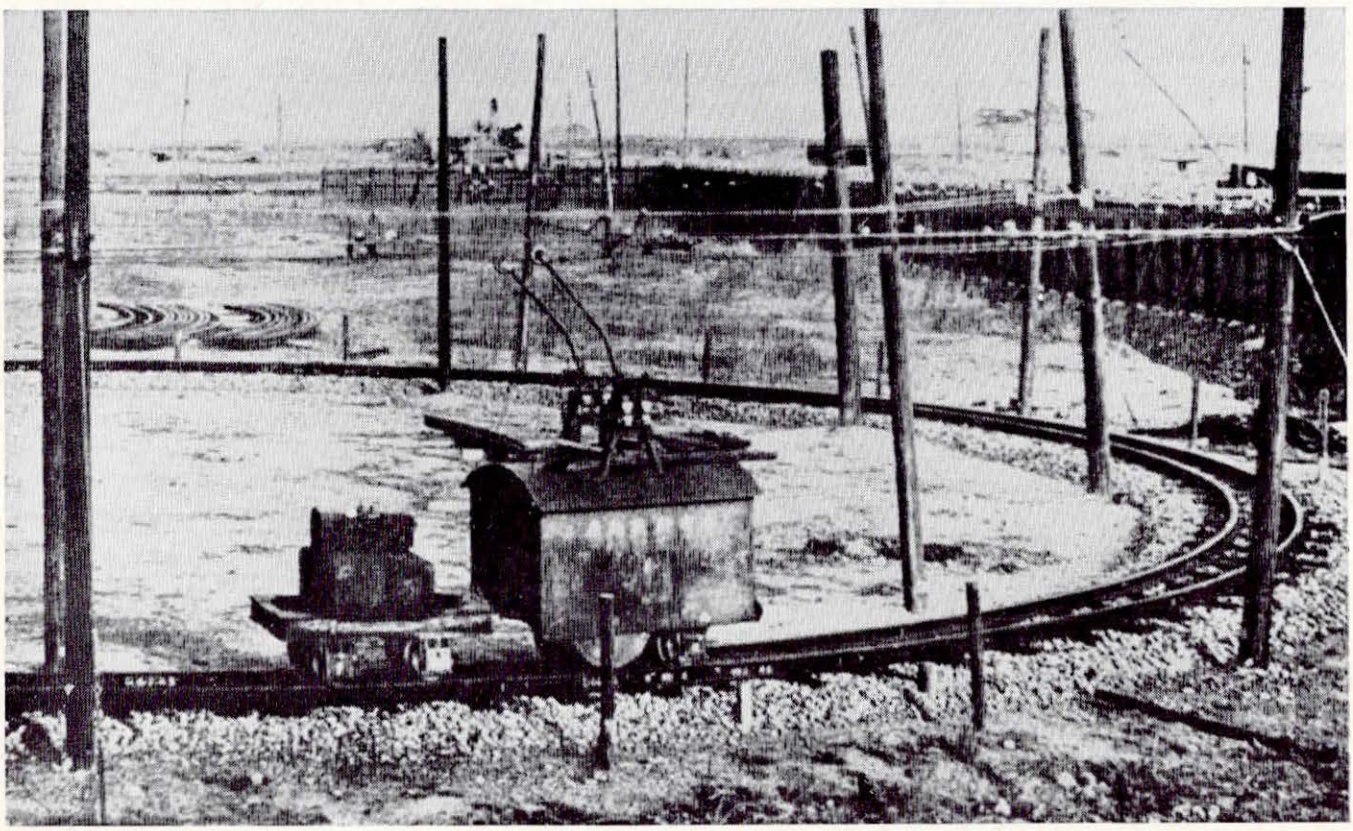

This photograph is 40 years old.
We took it at our Osaka Works in 1928 during a ten-year study of the abrasion of rails and rolling stock, in collaboration with the Japanese Government Railways.
And presented the results of the research at the 2nd International Rail Assembly in Zurich in 1932.
The unusual thing is that today these results are still regarded as definitive.
Nobody else has ever had to do this kind of research.
Maybe nobody else ever will.

Original rolling stock research characterizes our long history of manufacture. Our current work, for instance, will show us how to build wheels and axles for a new Japanese National Railways super-express expected to operate at speeds up to 160 mph. For this train, wheel tests are being conducted at speeds up to 200 mph.
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